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DETAILED REPORT OF EXPLORATIONS IN CENTRAL ASIA AND WESTERNMOST CHINA

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DETAILED REPORT OF EXPLORATIONS IN CENTRAL ASIA AND WESTERNMOST CHINA

CARRIED OUT AND DESCRIBED UNDER THE
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AUREL STEIN, K.C.I.E.

INDIAN ARCHAEOLOGICAL SURVEY

VOL. I TEXT

WITH DESCRIPTIVE LISTS OF ANTIQUES BY F. H. ANDREWS
F. M. G. LORIMER, C. L. WOOLLEY, AND OTHERS; AND
APPENDICES BY J. ALLAN, L. D. BARNETT
L. BINYON, É. CHAVANNES, A. H. CHURCH
A. H. FRANCKE, A. F. R. HOERNLE, T. A. JOYCE
R. PETRUCCI, K. SCHLESINGER, F. W. THOMAS

OXFORD
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1921

TO THE MEMORY OF

ÉDOUARD CHAVANNES

WHO FROM HIS UNRIVALLED KNOWLEDGE OF CHINA'S PAST

NEVER FAILED TO GUIDE AND ENCOURAGE MY LABOURS

THIS RECORD IS DEDICATED IN

ADMIRATION AND AFFECTION

FOR THE MAN, THE SCHOLAR, AND THE FRIEND

INTRODUCTION

THE object of this publication is to provide a full record of the explorations, archaeological in the first place but to a large extent also geographical, which my second Central-Asian expedition, undertaken under the orders of the Government of India, enabled me to carry out during 1906–8 in widely distant regions of innermost Asia. The plan of these explorations was directly based upon the results which had rewarded my first journey in Chinese Turkestān in the year 1900–1, and their start fitly coincided with the completion of *Ancient Khotan*, my Detailed Report on that pioneer expedition.

The new explorations were destined from the outset to cover a far wider area, extending from the Hindukush valleys and the uppermost Oxus right across the whole length of the Tārīm Basin to the province of Kan-su on the western marches of China proper. But the aims prompting my renewed efforts were the same, and since the results gained in the form of archaeological discoveries, new surveys, and observations of all kinds have so abundantly justified them as to claim these bulky volumes for their record, the briefest reference to the general objects of my enterprise may suffice here.

Objects of explorations.

There was in the first place the fascinating hope of recovering from ruins long ago abandoned to the desert more relics of that ancient civilization which the joint influences of Buddhist India, China, and the Hellenized Near East had fostered in the scattered oases of those remote Central-Asian passage lands. Only by local investigations could there be cleared up in detail the historical topography of the ancient routes which had witnessed that interchange of civilizations between India, Western Asia, and the Far East, maintained as it was during centuries in the face of very serious physical obstacles through trade, religious missions, and the Chinese empire's intermittent efforts at political and military expansion into Central Asia. Last but not least, I was anxious to use whatever opportunity might offer for the exploration of previously unsurveyed ground in deserts and mountains. It was bound to help towards the elucidation of important geographical factors directly affecting the desert sites which have preserved those relics of antiquity, and closely bearing also upon the physical conditions and economic history of Central Asia in general.

Extent of explorations.

It appears to me a favour of Fate that I was able to carry through my programme in its entirety and with abundant results of the value of which to research the student of these volumes may safely be left to form his own judgement. As regards the efforts and hardships its execution implied, it will suffice to refer him to the story as told in *Ruins of Desert Cathay*, the Personal Narrative of my journey.[1] But special mention seems due here of the extent of my explorations, as indicated by the length of time spent over constant travel and field-work, more than two years and a half, and by the aggregate of the marching distances covered on foot or on horseback, close on ten thousand miles; for in this extent is to be found the reason for the title I have chosen for the present publication.

[1] *Ruins of Desert Cathay, Personal Narrative of explorations in Central Asia and westernmost China.* By M. Aurel Stein. In two volumes, with numerous illustrations, colour plates, panoramas, and maps from original surveys. Macmillan & Co., Ltd., London, 1912.

Adoption of title *Serindia.*

As a glance at the general map illustrating our surveys shows, the geographical limits of the work accomplished comprise practically the whole of that vast drainageless belt between the Pāmīrs in the west and the Pacific watershed in the east, which for close on a thousand years formed the special meeting-ground of Chinese civilization introduced by trade and political penetration and of Indian culture propagated by Buddhism. The term *Serindia*, as adopted (in the form *Sérinde*) by valued French fellow-scholars, is excellently suited for the designation of this region, well-defined by nature as well as by historical relationship. Significant brevity would amply justify its use even if the interpretation which derives Procopius' local name *Serinda* from a compound of the terms Σῆρες and Ἰνδοί [2] may prove to have no better foundation than 'learned popular etymology'.

Expedition sanctioned by Indian Government.

The plan of my new journey was already formed in 1904 while, burdened with heavy administrative duties as Inspector General of Education and Archaeological Surveyor, North-West Frontier Province and Baluchistan, I was still struggling for leisure to complete my *Ancient Khotan*. Encouraged by the kind personal interest of my lamented old chief, Colonel Sir Harold Deane, that great Warden of India's North-West Marches, I submitted my detailed proposals in the autumn of that year to the Government of India, then under the aegis of Lord Curzon as Viceroy. His well-known interest in geographical research and his powerful support of all work bearing on the antiquities and history of India were of the greatest help towards securing a favourable reception of my plan, and my gratitude for this help will be lasting. The assistance of kind patrons and friends such as the late Sir Denzil Ibbetson and Mr. (now Sir Edward) Maclagan, K.C.I.E., C.S.I., then officiating as Secretary in the Revenue Department of the Government of India and now Lieutenant Governor of the Punjab, did much to smooth the way for a timely consideration of my proposals.

Co-operation of British Museum Trustees.

Their final sanction by Government, with the approval of H.M. Secretary of State for India, was facilitated when the Trustees of the British Museum, accepting the former's suggestion, generously agreed to contribute two-fifths of the actual cost of the expedition, estimated by me at Rs. 36,000 (then £2,400),[3] against a corresponding share in the prospective archaeological 'finds'. In view of the manifold and very valuable help which the learned staff of this great institution have rendered towards the elaboration of the results both of this and my first expedition it is a particularly gratifying thought that the large collection of antiques which I succeeded in bringing back as tangible 'archaeological proceeds', including hundreds of paintings of great artistic interest, manuscripts by thousands, etc., has made this share, even from the financial point of view, a very profitable investment.

Postponement of start.

After final sanction of my proposals had been secured in the spring of 1905, an official condition coupled with it as regards the preceding completion of *Ancient Khotan* still imposed a delay of one year upon their execution. But by dint of great exertions and by the help of a generous concession of Government which set me free from administrative duties for six months in Kashmir, I was able to satisfy that condition and to set out for my tasks beyond the great ranges northward by the end of April, 1906.

Help of Survey of India.

For those tasks, as far as they were of a geographical nature, I was provided from the first with an asset of the greatest value by the help of the Survey of India Department. Colonel F. B. Longe, R.E., C.B., then Surveyor General of India, had readily agreed to depute with me one of the Department's trained Indian surveyors and to provide a special grant to meet all costs connected with his employment

[2] Cf. Procopius, *Libri de bellis* (ed. Haury), VIII. 17. 7; Yule-Cordier, *Cathay*, i. pp. 24, 204; Coedes, *Textes grecs et latins*, pp. xxix, 127.

[3] This estimated provision had, in view of the increased cost, caused by the transport of an unexpectedly large collection of antiques and to some degree also by the general rise of prices in Chinese Turkestān since the time of my first expedition, to be supplemented in 1908 by an additional grant of Rs. 12,000 from the Indian Government.

and our topographical work. Colonel (now Sir Sidney) Burrard, R.E., K.C.S.I., F.R.S., first as Superintendent, Trigonometrical Surveys, and later as Surveyor General, showed the keenest interest in my explorations and used every opportunity to encourage and guide our labours in the field by his experienced advice. He greatly facilitated the subsequent preparation of their cartographical record in the Trigonometrical Survey Office, Dehra Dun, as now presented in the atlas of ninety-four map sheets, on the scale of four miles to the inch, which forms volume V of this publication.

In my *Notes on Maps illustrating explorations in Chinese Turkestan and Kansu* which accompanied much-reduced reproductions of these maps as published in the Royal Geographical Society's *Journal*, 1911,[4] detailed information has been given as regards the methods used in our surveys (which comprised triangulation and astronomical observations besides regular plane-table work on all routes, whether followed with my topographical assistant or by either of us alone); as to my direct supervision of the work in general, the phonetic transliteration adopted for the record of local names, etc., as well as regards the system used for the final compilation of the map sheets.[5] Of these reduced maps the one showing in a single sheet the total area surveyed on this journey, on the scale of 1 : 3,000,000, has with the kind permission of the Royal Geographical Society been reproduced as a kind of Index map to the Atlas. Incidentally it may serve as an apt illustration of the great extent of the ground over which the devoted exertions of my assistants made it possible to carry our topographical labours. Use has been made also of this general map in order to indicate by references on superimposed 'tracings' the chapters in which information of geographical interest is given on particular areas, and thereby to facilitate the use of my printed record by geographical students. Atlas of maps embodying surveys.

For the successful attainment of my topographical programme it was of the greatest value that I was provided from the first in Rai Rām Singh, now Sub-Assistant Superintendent, Survey of India, with a surveying assistant of tested ability and familiar with Central-Asian mountains and deserts from previous expeditions, including my own first journey. When reasons of health connected with the hardships of our winter campaign 1906–7 obliged him to return to India, Sir Sidney Burrard took care to replace him by Rai Bahādur Lāl Singh, a surveyor of exceptionally wide experience and one whose eagerness for hard work under conditions however trying I have never seen surpassed. I found in both surveyors willing and always reliable helpers for many other practical tasks. It has been a source of sincere gratification to me that the Royal Geographical Society, when it honoured me on my return from this journey with the Founder's Gold Medal, did not fail to recognize the services of those two valiant assistants by appropriate awards. Surveying assistants.

[4] See *The Geographical Journal*, 1911, pp. 275–80.

[5] I may note here that the results of the surveys carried out on my first and second expeditions have been carefully embodied, together with the cartographical results of my third Central-Asian journey (1913–15), in a final atlas of forty-nine sheets on the scale of 1 : 500,000, which is now approaching completion at the Trigonometrical Survey Office, Dehra Dun. This new atlas thus comprises the whole of the topographical work accomplished during my Central-Asian explorations, and has been prepared with improved methods of technical reproduction. It is to be accompanied by a *Memoir* from my pen giving full details as to the materials used for its construction and including triangulation charts and complete lists of astronomically determined positions.

In this final map publication it has been my endeavour to rectify any inaccuracies which our subsequent surveys have brought to light in the cartographical representation of certain features on ground comprised in the 4 miles to 1 inch sheets, as well as to introduce greater consistency in the spellings of local names than was possible at the time when those map sheets were being prepared at Dehra Dun (1909–11).

Owing to technical reasons connected with my absence in England during that period, it was impossible for me to revise the original drawings for the sheets or to examine more than one proof of the sheets as produced in their final stage showing the hill-drawing and colours for the different kinds of ground (cultivation, sandy tract with vegetation, drift-sand desert, etc.). Other reasons of a technical character, which cannot be set forth here in detail, account for a certain roughness of execution. Nevertheless I believe that these sheets, if tested on the spot, will be found well able to bear comparison as regards the essential feature of accuracy with any maps previously available for ground of corresponding character in Central Asia.

'Handy-man' from Sappers and Miners.

My small staff was completed by Naik Rām Singh, a non-commissioned officer of the First (King George's Own) Sappers and Miners, whom the kind offices of Colonel (now Major General) J. E. Dickie, R.E., C.B., then Commanding R.E. on the N.-W. Frontier, secured as my 'handy-man' from that distinguished corps. Naik Rām Singh proved a very willing and useful helper in many practical tasks connected with excavations, including detailed plans of numerous ruins. To him is due also the developing of most of the photographs brought back from the journey, all of which were taken by myself, and a selection from which has been used for illustrating these volumes. The tragic fate which overtook this capable and faithful assistant towards the close of our journey was a grievous blow for me and has been fully recorded in Chapter XXXIII.[6]

Summary of expedition results.

Considering how bulky these volumes have grown, I should gladly forbear attempting any summary of the varied results of this journey were it not impossible without it either to account for the protracted efforts which their elaboration has claimed or to convey an adequate idea of the manifold and important help which I received for those tasks from expert collaborators. It may serve a useful purpose also as a reasoned synopsis of the main sections of the present work. The routes which I followed from the Indo-Afghān border to the uppermost Oxus (Chapters I, II) allowed me to study on the ground numerous questions bearing on the history, ethnography, etc., of Swāt, Dīr, Chitrāl, and Mastūj, and to clear up in particular the topography of a memorable Chinese expedition (A. D. 747) across the Pāmīrs and Hindukush. The special permission graciously accorded to me by H.M. Habīb-ullah, the late King of Afghānistān, had opened access for me to uppermost Wakhān and the Afghān territory on the Pāmīrs, and the observations gathered here and subsequently on my way from Sarīkol to Kāshgar (Chapter III, sections i–iii) proved specially useful for the elucidation of early itineraries across the 'Roof of the World'.

Sir George Macartney's help.

A short stay at Kāshgar, under the hospitable roof of Mr. (now Sir George) Macartney, K.C.I.E., H.M. late Consul General for the 'New Dominions', enabled me to resume personal touch with that old and ever-helpful friend whose great influence with the Chinese administration throughout that wide region was of the utmost value for the success of my expedition. The debt of gratitude I owe him for the unfailing watchful care he exercised from afar is heavy. But equally important was the service he rendered for my tasks by choosing for me an excellent Chinese secretary in the person of Chiang Ssŭ-yeh (Mr. Chiang Hsiao-yüan 蔣孝琬).[7] The help of this thoroughly qualified and conscientious Chinese scholar proved of the greatest advantage for my archaeological tasks. Throughout our hard travel and field-work he proved the most devoted of helpmates, ever ready to share hardships and labours for the sake of my scientific interests.

Chiang Ssŭ-yeh, Chinese Secretary.

Support of Chinese administrators.

Chiang Ssŭ-yeh's genuine zeal and persuasive tact always helped me to secure that willing co-operation of the Chinese administrators which was essential for the execution of my plans. Without their efficient help I could not have secured the transport, men, and supplies needed for my expeditions in search of ruined sites in dreaded deserts, nor for my explorations in equally forbidding mountains. I shall always remember with gratitude the proofs of invariable attention and goodwill I received from Mandarins of the old régime at the oases which served as my successive 'bases of operations' on this journey. For the many in whom I found trustworthy friends with real scholarly interest in my antiquarian aims and 'finds' I may refer to my Personal Narrative.[8] But specially grateful mention is due to my old friend P'an Ta-jên (Mr. P'an Chên 潘震), who as Amban of Khotan had helped me so kindly during the explorations of 1900–1. Promoted to the position of

[6] See below, pp. 1317 sq.

[7] For portraits of Chiang Ssŭ-yeh, see *Desert Cathay*, i. Fig. 39; ii. Fig. 308. For characteristic instances of his help, cf. below, pp. 569, 593 sqq., 646, 714, 801–25, etc.

[8] Cf. *Desert Cathay*, i. p. xvi and passim.

Tao-t'ai at Ak-su, he never failed to use the influence of his high office for smoothing my paths, however far away the explorations of this second journey might take me.

From Kāshgar I made my way past Yārkand and the foot of the westernmost K'un-lun to Khotan (Chap. III, sec. iv, v). After having carried out from there surveys of unexplored parts of the high glacier-crowned range in the south towards the close of the summer, and having gathered a rich harvest of small antiques from the old capital of the oasis, I was able to search with profit a series of wind-eroded sites previously unvisited to the north-east (Chapter IV). Next, excavations made at sand-buried sites near Domoko to the east yielded a rich harvest of antiques and manuscript remains in Sanskrit, Khotanese, and Chinese dating from the close of the T'ang period (Chapter V). Close study of the physical conditions on this ground and of the successive shifts in the cultivated area it has witnessed proved of considerable geographical interest with regard to questions of 'desiccation'. The excavations I resumed during the second half of October at the Niya Site, abandoned to the desert sands since the third century A. D., were rewarded by unexpectedly rich finds of wooden documents in Kharoṣṭhī script and Prākrit language, besides other ancient records in Chinese and a mass of miscellaneous antiques helping further to illustrate the life and civilization prevailing in the oases of the Tārīm Basin at that early period (Chapter VI).

Explorations about Khotan, 1906.

Excavations at Niya Site.

Continuing my journey to the east I reached, near the terminal bed of the Endere River, the easternmost limit of the area visited in 1900–1. Fresh excavations around the T'ang fort revealed remains of a far earlier settlement, throwing interesting light on the history of this desert site (Chapter VII). The long desert journey which thence brought us via Charchan and Vāsh-shahri to Charkhlik (Chapter VIII) helped to clear up the historical topography of an important ancient route, directly connecting Khotan with China, and showed its conditions practically unchanged from those in which Hsüan-tsang and Marco Polo saw it.

From Endere R. to Charkhlik.

At Charkhlik we had reached the only inhabited place now of any importance in the desolate region of drift-sand, wind-eroded or salt-encrusted clay, and bare gravel which surrounds the Lop-nōr, or the terminal marshes of the Tārīm, and the vastly greater dried-up ancient sea-bed beyond them. This region of Lop, the ancient *Lou-lan* or *Shan-shan* of the Chinese, had by its position on the earliest routes of Chinese expansion into Central Asia played an important historical part from the time of the Former Han dynasty. The exploration of its ancient remains formed the chief object of my first winter's work, and it has appeared appropriate to preface its record by a critical analysis of the numerous early notices concerning Lop, Shan-shan, and Lou-lan (Chapter IX).

History of Lop region.

My immediate goal was the ancient settlement in the waterless desert north of Lop-nōr first discovered by Dr. Hedin. The trying marches there across wind-eroded wastes proved of distinct geographical and antiquarian interest by revealing plentiful relics of the Stone Age and unmistakable traces of an ancient delta (Chapter X). The systematic excavations carried out at the ruins of what can now be definitely identified as the walled Chinese station of Lou-lan and of an outlying smaller settlement yielded an abundance of written records in Chinese and Kharoṣṭhī, dating mainly from the third century A. D., and many interesting remains of the architectural and industrial art of that period (Chap. XI, sec. i–ix). Supplementary explorations carried out on my third journey have enabled me to elucidate the position occupied by the 'Lou-lan Site' with regard to the earliest Chinese route into the Tārīm Basin (Chap. XI, sec. x, xi).

Exploration of Lou-lan Site.

After crossing the unexplored desert belt of high dunes to the Tārīm and examining small sites near its terminal course, I excavated the ruins of Mīrān, marking the site of an early settlement of Shan-shan due south of Lop-nōr. Hundreds of Tibetan records on wood and paper were recovered, together with fragments of Turkish 'Runic' documents and plentiful other relics, from the refuse-heaps of a ruined fort (Chapter XII). They proved that this portion of the site was occupied during

Excavations at Mīrān ruins.

the eighth–ninth century A. D. But remains far older and of distinct artistic interest were revealed by the clearing of certain Buddhist shrines (Chapter XIII). The fine wall-paintings which adorned them, in places inscribed with Kharoṣṭhī legends, offered striking testimony to the powerful influence which Hellenistic art, as transplanted from the Near East to Gandhāra, had exercised even on the very confines of China.

Desert route to Tun-huang.

Crossing in February–March, 1907, the Lop desert north-eastwards by the lonely track which Marco Polo, like early Chinese pilgrims before him, had followed, I was able to collect observations of interest both for the physical geography of the ground which separates the present terminal basins of the Tārīm and the Su-lo Ho, and for the historical topography of the earliest Chinese route into Central Asia (Chapter XIV). Before reaching my new base at Tun-huang, I found myself rewarded by the discovery of the long-forgotten westernmost portion of that ancient frontier wall, a true *Limes*, which the Han emperor Wu-ti had constructed towards the end of the second century B. C. in order to guard his newly opened line for China's commercial and political expansion towards Central Asia against the raids of the Huns.

Exploration of ancient Chinese *Limes*.

In Chapters XV–XIX I have described the explorations extending over two months and a half which enabled me to trace the line of the ancient wall, found often in remarkable preservation, for a total length of over 140 miles and to search the ruins of all its watch-towers and stations, including the famous 'Jade Gate'. Having remained undisturbed by the hand of man in the solitude of the gravel desert, they yielded a rich harvest of early Chinese and other records, mainly on wood, together with many interesting relics of the life led along this most desolate of borders during the centuries immediately preceding and following the time of Christ. Since the unsurpassed learning and critical acumen of M. Chavannes has rendered the great mass of the Chinese documents recovered here accessible to research,[9] it has become possible for me to discuss in Chapter XX the general organization of the *Limes* in the light of the historical and antiquarian information furnished by them, and thus to bring into correct focus the significance of the antiquarian facts revealed by actual exploration of the Limes.

Discoveries at 'Caves of Thousand Buddhas'.

But that region of Tun-huang had reserved for me another discovery very different in character but quite as fascinating and important. To the south-east of its main oasis, at the foot of a barren dune-covered hill chain, there lies the sacred site of *Ch'ien-fo-tung*, or the 'Caves of the Thousand Buddhas'. Buddhist piety from about the fourth century A. D. onwards has here honey-combed the rock walls of a true Thebais with hundreds of cave-shrines, still objects of worship (Chapter XXI). Their rich decoration with frescoes and stucco sculptures, much of it fine work of T'ang times (Chap. XXV, sec. i), would alone have justified an archaeological pilgrimage from the Far West. Here I had the good fortune in May, 1907, to be the first European to gain access to a great deposit of ancient manuscripts and art relics of many kinds which had lain hidden and well-protected in a walled-up rock chapel for close on nine hundred years. The story how I secured here twenty-four cases of ancient manuscripts, most of them Chinese, but many also in Sanskrit, Khotanese, Kuchean, Sogdian, Manichaean and 'Runic' Turkish, Uigur, and Tibetan, and five more cases filled with paintings, embroideries, fine textiles, and other artistic offerings of Buddhist devotion has been fully told in Chapter XXII.

Ancient Buddhist paintings recovered.

The hundreds of fine paintings on silk here recovered may be said to have opened a new chapter in the history of Buddhist pictorial art as developed in Central Asia and China, largely under influences transmitted from Gandhāra, and their study, inaugurated in Appendix *E* by such competent collaborators as the late M. Petrucci and Mr. L. Binyon, will need prolonged efforts. In Chapter XXIII I have not been able to attempt more than a systematic grouping of all pictorial relics

[9] See Chavannes, *Les Documents chinois découverts par Aurel Stein*, Oxford University Press, 1913, pp. 1–154.

and a review of the essential characteristics of their iconography and artistic execution. It is hoped that the particularly full descriptions furnished in the List of Chap. XXV, sec. ii, and the provision of numerous reproductions both in Vol. IV and in the portfolio of the *Thousand Buddhas*[10] will stimulate and assist detailed study by competent experts.

Analysis of textile finds

The same remarks apply to the analysis offered in Chap. XXIV, sec. i–iii, of the very numerous and interesting textile relics with reference to their technique and particularly their decorative designs. As regards the thousands of texts and documents in a variety of languages brought away from the walled-up chapel, Chap. XXIV, sec. iv, v, merely records the arrangements made for their first examination and cataloguing, and passes in rapid review any indications of quasi-antiquarian interest which the labours already accomplished by competent collaborators may furnish as to the sources of the old monastic library and the like. Here, as in all similar cases, the systematic analysis of the manuscript materials discovered falls beyond the scope of this Report and must be left to separate publications by qualified experts.

Study of MS. finds.

Explorations in Nan-shan and Kan-su.

From the 'Thousand Buddhas' I proceeded in June, 1907, to the oasis of An-hsi, and, after tracing in its vicinity more remains of the ancient *Limes*, explored the ruined site of Ch'iao-tzŭ and a smaller group of cave-temples, known as the 'Myriad Buddhas', in the outer hills of the westernmost Nan-shan (Chapter XXVI). Then in July I made my way along the high and barren mountains of this range to Chia-yü kuan, the well-known western Gate of the mediaeval 'Chinese Wall'. This, in spite of its late origin, proved to offer here points of distinct antiquarian interest. Extensive surveys in the high snowy ranges of the Central Nan-shan, rich in topographical results,[11] and some antiquarian work along the ancient high road leading through Kan-chou and Su-chou completed our labours in Kan-su (Chapter XXVII). Then a long journey in the autumn from An-hsi allowed me to trace in detail Hsüan-tsang's adventurous crossing of the Pei-shan desert and subsequently to pay rapid visits to the old remains of Hāmi and Turfān (Chapter XXVIII). Next ruined Buddhist sites of the Kara-shahr district offered opportunities for excavations particularly fruitful in fine relievos reflecting Graeco-Buddhist art (Chapter XXIX).

Winter campaign in Tārīm Basin, 1906.

My second winter campaign in the Tārīm Basin included a successful crossing of the great 'Sea of Sand' of the Taklamakān at its widest, accomplished under serious risks and ending with a fresh visit to the ruins of Kara-dong (Chapter XXX), and subsequently more excavations rewarded by interesting results at desert sites to the east and north of Khotan (Chapter XXXI). In the spring of 1908, travelling northward, I was able to reap a rich harvest of ancient records in Khotanese, Tibetan, and Chinese at the ruined fort of the Mazār-tāgh, and subsequently, passing through Ak-su, Uch-Turfān, and unsurveyed hill ranges south of the T'ien-shan, to visit ruined sites near the ancient Chinese high road leading towards Kāshgar (Chapter XXXII). Finally, after returning to Khotan, I used the time still available in the summer and autumn of 1908 for fresh geographical work in the high and almost wholly unexplored K'un-lun mountains between the head-waters of the Khotan rivers and the barren plateaus of the extreme north-west of Tibet (Chapter XXXIII).[11a] A serious accident through frost-bite, suffered in my feet just when completing my last exploratory task on the ice-clad crest of the main K'un-lun range, caused me to return to India in a crippled state. But my collection of antiquities, filling close on a hundred cases, travelled safely, and by the close of January, 1909, it reached the British Museum uninjured.

Explorations in main K'un-lun range.

Deputation to England, 1909.

The elaboration of the over-abundant results brought back from this expedition was bound to lay very heavy tasks on my shoulders. So I felt very grateful when the Government of India sanctioned my being placed on special duty in England for a period of two years and three months

[10] Regarding this supplementary publication, see below, p. xvi.

[11] Fully described in *Desert Cathay*, ii. pp. 297–333.

[11a] For a detailed account, cf. *Desert Cathay*, ii. pp. 440–82.

in order to enable me to work on these tasks within easy reach of my collection. The kind personal interest taken in my efforts by the late Lord MINTO, then Viceroy, helped much to secure for this arrangement the approval of H.M. Secretary of State. With so much detailed research to be started on new materials likely to need scholarly application for years, it was from the first one of my chief cares to secure the help of expert collaborators.

Publication of Personal Narrative.

But equally important it seemed that I should work out my own observations and conclusions in broad outlines, making them available to fellow-scholars as well as to a wider public interested in geographical work. With the kind permission of the India Office authorities I was able to achieve this object at the close of 1911 by the publication of the Personal Narrative of my journey as contained in *Ruins of Desert Cathay*. Its two volumes, amply illustrated, may well be considered to have served their purpose as a prelude, and in some respects a necessary complement, to my present Report, besides reducing any inconvenience that may have been caused by delay in its publication.

Help of Mr. F. H. ANDREWS.

I could not have attempted within the allotted time of my 'deputation' in England to undertake all the manifold labours which the arrangement and description of a collection so varied demanded, and for which my personal direction was needed, had I not enjoyed once again the great boon of the experienced and devoted assistance of my artist friend, Mr. Fred H. ANDREWS, late Principal of the School of Art, Lahore, and now Director of the Technical Institute of Kashmīr. I have had repeated occasion before [12] to record the invaluable services which his exceptional knowledge of Eastern arts and crafts in general, his prolonged study of Central-Asian antiquities, and his own artistic gifts have enabled him to render to our common tasks ever since the commencement of my Central-Asian explorations. My gratitude for the untiring efforts which Mr. Andrews bestowed upon tasks connected with my collection and the preparation of the present Report must be all the deeper because during those years, and down to 1913, they implied the sacrifice of what hard-earned leisure he could spare from exacting educational duties in London.

Assistants at British Museum.

The most important and urgent of those tasks was the preparation of full Descriptive Lists of all classes of antiquities in the collection, arranged according to sites. It would have been impossible to assure this within any reasonable limits of time had not liberal provision made by the India Office authorities allowed advantage to be taken of the trained help and scholarly zeal of several young classical archaeologists, Mr. J. P. DROOP, Miss F. M. G LORIMER, Mr. C. L. WOOLLEY, and, for an initial period, also Mr. H. G. EVELYN-WHITE, who conjointly or successively have filled the posts of assistants at my collection for over two years. My grateful acknowledgements are due to them all, but in particular to Miss Lorimer and Mr. Woolley. The latter brought his ample experience gained in the course of archaeological field-work in Egypt and elsewhere to bear upon a systematic revision of all Descriptive Lists of miscellaneous antiques, as far as they had been prepared by the end of 1911, when I returned to duty in India.

Miss LORIMER continued her zealous and painstaking work as assistant also subsequently and rendered very valuable help with regard to the temporary exhibition which, arranged in 1914 in the newly opened north galleries of the British Museum, made characteristic portions of the whole collection accessible to the public for some months.[13] To Miss Lorimer I am specially indebted also for most of the detailed descriptions of the pictorial remains from the 'Thousand Buddhas',[14] while a correspondingly large share of the detailed accounts of textile remains from the same hoard is due to Mr. Andrews' expert eye and hand.

[12] Cf. *Ancient Khotan*, i. pp. xi sq.; *Sand-buried ruins of Khotan*, pp. xxiii sq.; *Desert Cathay*, i. p. xix.

[13] See *Guide to an Exhibition of paintings, manuscripts, and other archaeological objects collected by Sir Aurel Stein, in Chinese Turkestan* (Printed by order of the Trustees of the British Museum, 1914).

[14] See below, p. 835, and *List of paintings, wood-cuts, etc., recovered from Ch'ien-fo-tung*, pp. 937-1088.

It may be convenient to explain here that the intended distribution of the whole collection between the Indian Government and the British Museum, which has by now been actually carried out,[14a] supplied *ab initio* an additional cogent reason for making all entries in the Descriptive Lists adequately detailed. Since the three-fifths share of the Indian Government is to be deposited in the new Imperial Museum at Delhi,[15] it is obvious that comparison which may be needed hereafter, for purposes of research, between different remains, when distributed between places so widely distant as London and Delhi, will ordinarily be practicable only by means of the descriptions recorded in the present Report and such reproductions as it has been possible to include in its Plates.[16] In view of the importance thus attaching to the Descriptive Lists, it ought specially to be mentioned also that, while they have been prepared by other and varying hands, their contents have undergone careful checking and, where it seemed to me needful, final revision by myself.

Distribution of collection.

Descriptive Lists of antiques.

The greater portion of the tasks above detailed had been completed when, by the end of 1911, I had to return to duty in India as Superintendent of the Frontier Circle, Archaeological Survey. By that time, too, most of the Plates illustrating antiques had been arranged, and some of the materials for the Appendices to be presently mentioned had been received from collaborators. Work on the text of *Serindia* claimed most of my time after the field season of 1912, devoted to Gandhāra sites, until in the summer of 1913 the generous support accorded by the Indian Government, then under Lord Hardinge as Viceroy, enabled me to undertake my third Central-Asian expedition. The ample results, archaeological and geographical, which it yielded,[17] as well as the development which took place in the political conditions affecting that remote field like the rest of Asia, have fully justified the timely execution of that long-cherished plan. But as only about one-fourth of my text had been prepared for the press by the time of my start northward at the end of July, 1913, the fresh explorations extending till February, 1916, implied a postponement of years in the completion of the present work.

Return to work in India.

Third Central-Asian expedition, 1913–16.

Fortunately this delay has not been without compensating advantages. The explorations renewed during 1914–15 in the Lop desert and in westernmost Kan-su have thrown fresh light upon numerous questions closely affecting the earliest Chinese routes into the Tārīm Basin, the eastern extension of the ancient *Limes*, etc. A reference to numerous chapters of *Serindia* will show the

Advantages of resumed explorations.

[14a] Objects allotted to the British Museum are marked with an asterisk in the *Index of objects*, etc., in Vol. III.

In addition to these all MSS. in Chinese, Sogdian, Turkish, and Uigur are deposited in the British Museum, while the India Office Library has received all Tibetan MSS.

[15] This does not apply to the share in manuscripts which have been placed in the India Office Library, London.

[16] Some notes concerning the arrangement of entries in the *Descriptive Lists* may usefully find brief record here.

The arrangement follows throughout the numerical order of the 'site-marks'. As these had to be given as the objects were discovered, acquired, or unpacked, this numerical order does not anywhere represent an attempt at systematic classification. 'Site-marks' given at the time of discovery show the initial letter of the site, the number of the ruin, etc., followed by plain Arabic figures, e.g. N. xxiv. viii. 35. In such cases these last figures correspond to the actual sequence of 'finds'. When 'site-mark' numbers were given by myself at the site, but after the day's work, they are preceded by a zero, e.g. L.A. vi. ii. 061. When objects had been marked by me merely with the place of discovery and numbers were subsequently added at the time of unpacking at the British Museum, two zeros precede the numbers, e.g. M. i. ix. 003.

Where it has been found convenient to indicate in the descriptive entry for one particular object descriptive details equally applicable to other objects of a closely related type, an asterisk has been prefixed to the 'site-mark', e.g. *Ch. 0010.

In a few cases where partially effaced 'site-marks' had been misread at the British Museum, the necessary corrections were subsequently effected by me in the light of my diary records when dealing with the remains of the particular site. In all cases the 'site-mark' shown in the Descriptive List is to be considered as the one finally verified.

Throughout the abbreviations *R.* and *L.* have been used to indicate the right and left side of objects as they are seen in reproductions, except where the right and left proper of the body are referred to.

[17] For a preliminary account of this expedition, see my paper *A Third Journey of Exploration in Central Asia*, in the *Geographical Journal*, 1916, xlviii. pp. 97–130, 193–225.

benefit my examination of the history and topography of those areas has derived from the new explorations.

Deputation to England, 1916–17.

The period of 'deputation' to England which the Indian Government kindly granted to me in 1916 after the conclusion of my third journey meant a very valuable help for my remaining tasks. For over a year I was able to resume direct touch with the collection of antiques still deposited as a whole in the British Museum, with corresponding advantage to the great portion of *Serindia* (Chapters X–XX) which was written during this period. Last, but not least, I am grateful for the fact that my return to England allowed me to enlist the generous interest and support of the Right Honourable Mr. AUSTEN CHAMBERLAIN, then H.M. Secretary of State for India, for the publication of a much-needed complement of *Serindia*. I mean the portfolio of *The Thousand Buddhas*, intended to furnish in its large plates reproductions on an adequate scale of the most representative specimens of the paintings recovered from the walled-up cave-chapel of Tun-huang, artistic treasures to which the scope of the present Report would not allow full justice to be done.[18]

Portfolio of *Thousand Buddhas*.

Completion of *Serindia*.

Subsequent to my return to Kashmīr in the autumn of 1917, being placed on special duty, I was able to carry on the work still remaining on *Serindia* side by side with such tasks as the arrangement of my third collection and the preparation of the new atlas of Central-Asian surveys demanded. My manuscript of the text was finished by September, 1918, and some ten months later I had the satisfaction to see the printing of it, which my third Central-Asian journey and then the difficulties resulting from war conditions had stopped, resumed by the Oxford University Press. The completion of the heavy task of passing these volumes through the press was facilitated by a period of leave and subsequent 'deputation' to England which Government had been pleased to grant me during 1920.

Collaboration of M. CHAVANNES.

It still remains for me to record my grateful acknowledgements for the manifold and very valuable help by which fellow-scholars and others have enabled me to bring these protracted labours to a satisfactory end. Among those whom I have the privilege to claim as honoured collaborators, my heaviest debt of thanks is due to the late M. ÉDOUARD CHAVANNES, Membre de l'Institut, the greatest western authority of our times on all that concerns China's past, and the most effective of helpers. In the spring of 1909 he had readily charged himself with the detailed study and publication of all early Chinese records excavated by me. In spite of the quite exceptional difficulties of decipherment and interpretation which many among them offered, and their very large number, his amazing powers of rapid and yet profoundly critical work had enabled him a year later to place at my disposal annotated translations of nearly a thousand of them. These were of great immediate help to me for my *Desert Cathay* and, after having been revised by M. Chavannes and provided with an *Introduction* of masterly lucidity, were published in a separate quarto volume as a forerunner of the present publication.[19] The perusal of almost any chapter in the latter dealing with ancient sites which have yielded written records will prove to what extent my interpretation of their past has been guided by M. Chavannes' labours. But they by no means exhausted the help I was privileged to receive from him.

Last contributions of M. CHAVANNES.

However busy over big tasks of his own, he was ever ready to grant it where matters needing Sinologue research were concerned, and reference to Appendix *A* will show how varied such contributions from his indefatigable hand were. The last of those reproduced there relating to inscribed paintings from the *Thousand Buddhas* have a pathetic interest of their own.[20] They were

[18] The portfolio of *The Thousand Buddhas*, containing forty-eight plates mostly 24 by 20 inches in size and about half of them in faithful colour reproduction, will be published under the order of H.M. Secretary of State by Messrs. B. Quaritch, London, very soon after the issue of *Serindia*. Constant references to its plates will be found in Chapters XXIII–XXV.

[19] See *Documents chinois découverts par Aurel Stein dans les sables du Turkestan chinois*, Oxford University Press, 1913

[20] See below, pp. 1334 sqq., also p. 835.

meant to illustrate the materials which he proposed to treat in a volume of the Académie des Inscriptions' *Mémoires concernant l'Asie orientale*, intended to serve as a memorial of his departed pupil and friend, M. Petrucci. Soon after those letters were written, M. Chavannes himself suffered a premonitory attack of the fell disease which six months later was to end his life prematurely, an irreparable loss to research. My recollection of that bright October afternoon of 1917, when on my way out to India I bade him farewell in his garden home of Fontenay-aux-Roses, after having obtained his acceptance of the dedication of *Serindia*, will never fade, nor my grateful attachment to his noble memory.

Help of Dr. Rud. Hoernle.

I have suffered the loss of another most valued collaborator in the person of the late Dr. A. F. Rudolf Hoernle, C.I.E., a true pioneer of Central-Asian studies on the philological side. Just as he had done all he could to help forward the plan of my first expedition and then the elaboration of its results, he threw himself with the same persevering energy into the manifold labours demanded by the classification, preliminary analysis, and partial publication of the far more abundant 'finds' in Brāhmī script brought back from my second journey. His *Inventory List* of manuscripts in Sanskrit, Khotanese, and Kuchean contained in Appendix *F* bears eloquent proof to the untiring zeal with which, in spite of the burden of advanced age, he carried through this very troublesome task. In a series of articles he discussed the first results yielded by his study of the important series of Khotanese texts recovered from the Ch'ien-fo-tung hoard, and subsequently arranged for the publication of a number among them in his *MS. Remains of Buddhist Literature*, partly with the very competent help of Professor Sten Konow.[21] A kindly Fate had permitted the veteran scholar to carry on his cherished labours almost to the end of his long and fruitful life, which came on Armistice Day in November, 1918. The unfailing help I received from him for over twenty years past and his constant friendly interest will remain enshrined in my grateful memory.

Collaboration on Kharoṣṭhī records.

It has been a source of much satisfaction to me that the same highly qualified scholars, Professor E. J. Rapson, M. Émile Senart, Membre de l'Institut, and the Abbé Boyer, who had undertaken the decipherment and publication of the ancient Kharoṣṭhī documents on wood and leather discovered on my first journey,[22] willingly charged themselves with the same difficult task as regards the corresponding finds brought back from my second expedition. Professor Rapson has directly assisted me in preparing the present work by a series of valuable notes on certain Kharoṣṭhī tablets from the Niya and Lou-lan sites,[23] while the Abbé Boyer has laid me under a further great obligation by the successful decipherment of important inscriptions in Kharoṣṭhī and early Brāhmī from Mīran and the Tun-huang *Limes*.[24] In regard to my Sanskrit manuscript materials I have derived very helpful guidance from Dr. L. D. Barnett and Professor L. de la Vallée Poussin.

Examination of Tibetan MS. finds.

The considerable collection of Tibetan Buddhist manuscripts brought away from the 'Thousand Buddhas' and now deposited at the India Office Library has been completely catalogued by Professor L. de la Vallée Poussin, after a start had been made by Miss C. M. Ridding under the guidance of Dr. F. W. Thomas, the learned librarian of the India Office. To the latter's kindness I am indebted for communication of the extracts contained in Appendix *I*. Of direct and important advantage for the record of my archaeological work has been the preparation of a complete inventory of the great mass of Tibetan documents, mainly of a quasi-official character, brought to light from

[21] Cf. *J.R.A.S.*, 1910, pp. 834–8, 1283–1300; 1911, pp. 201 sqq., 447–77; *MS. Remains of Buddhist Literature*, i. pp. xxi sqq., 58 sqq., 75 sqq., 175, 214–356. Several texts prepared by Dr. Hoernle himself still await publication in a second volume of this work.

[22] Now published in *Kharoṣṭhī Inscriptions discovered by Sir Aurel Stein in Chinese Turkestan*, Clarendon Press, Oxford, Fasciculus I, 4to, 1920.

[23] See below, pp. 231 sqq., 414 sqq.

[24] Cf. below, pp. 529 sqq., 701 sqq.

the forts of Mīrān and Mazār-tāgh, by the Rev. Dr. A. H. FRANCKE, late of the Moravian Mission, Leh.[25] The valuable notes of a general kind which that very competent collaborator has published on these materials will be found reproduced for the main part in Appendix *G*. Very valuable help was rendered by Dr. L. D. BARNETT in furnishing me in Appendix *K* with exact translations of the Tibetan inscriptions found on certain of the Ch'ien-fo-tung paintings.

Cataloguing of Chinese MSS. from Ch'ien-fo-tung.

The cataloguing of the thousands of Chinese manuscripts and documents brought away from the 'Thousand Buddhas' and now deposited in the British Museum is steadily progressing at the expert hands of Dr. LIONEL GILES, Professor P. PELLIOT, who originally undertook it, having been kept from this big task by military duties during the war and other obligations.[26] Apart from the publication of two interesting Chinese texts from this collection bearing on the history and topography of Tun-huang, Dr. Giles has allowed me to benefit freely by his Sinological help in matters with which *Serindia* deals.

Collaboration on Sogdian MSS.

On the Iranian side I owe to my friend Dr. A. E. COWLEY, now Bodley's Librarian, Oxford, a debt of gratitude for having first paved the way for the decipherment of that series of documents in a previously 'unknown' script which the subsequent brilliant labours of the late M. R. GAUTHIOT have proved to contain the earliest extant remains of the Sogdian language.[27] M. Gauthiot's lamented and untimely death in 1916, due to a wound received in serving his country, has retarded the further decipherment of these records, and has left the hope unfulfilled of seeing the Sogdian texts of later script and date which I recovered from the 'Thousand Buddhas' published by the same highly-gifted scholar. Some of our later Sogdian texts had been previously examined and identified by Professor F. W. K. MÜLLER, the first decipherer of this language in manuscripts from Turfān.[28]

Help of Turcologists.

On the Turcological side, Professor V. THOMSEN, the famous decipherer of the Orkhon inscriptions, has done me the honour of editing and elucidating the documents, as well as the well-preserved complete text in Turkish 'Runic' script, from the Mīrān Site and the walled-up chapel of Tun-huang.[29] To Professor A. VON LECOQ, the distinguished Turcologist and Turkestān excavator, is due the critical edition of the Turkish *Khuastuanift* text in Manichaean script which I discovered at the 'Thousand Buddhas'.[30] Finally I must gratefully acknowledge here the help rendered by Dr. (now Sir) E. DENISON ROSS, C.I.E., in making a preliminary examination and inventory of our Uigur Buddhist manuscripts from the same site.[31]

Collaboration on Buddhist paintings.

From this long record of my philological collaborators I may now turn to those who did their best to further the tasks imposed by abundant art remains. The first in the field to help me was my old friend Monsieur A. FOUCHER. To his exceptional knowledge of Buddhist iconography I owe the correct interpretation of some of the most interesting of our mural paintings,[32] and also very useful guidance as to the classification, etc., of the paintings from the 'Thousand Buddhas'.[33] As regards the varied art aspects of these paintings I was fortunate enough to benefit by the very appreciative and enlightening interest taken in them by Mr. LAURENCE BINYON, a leading authority on the pictorial art of the Far East and now in charge of the Sub-Department of Oriental Prints and Drawings, British Museum. His expert care was of great help towards the successful preservation of the delicate silk paintings, found often in a very precarious condition, and also towards their faithful reproduction in the plates of the *Thousand Buddhas*.

It was Mr. Binyon's friendly intercession which enabled me to secure for this important part of

[25] Cf. below, pp. 467 sqq., 1289.

[26] See below, pp. 916 sqq.

[27] See below, chap. XVIII. sec. iv, pp. 671 sqq.

[28] For these Sogdian manuscripts from Ch'ien-fo-tung, see below, pp. 920 sqq.

[29] See below, pp. 471 sqq.; 921 sq.

[30] See *J.R.A.S.*, 1911, pp. 277–314; below, pp. 922.

[31] Cf. below, pp. 923, 925.

[32] See below, pp. 502, 521 sqq., 1252 sq.

[33] Cf. below, pp. 833, 836.

my collection an exceptionally qualified collaborator in the late Monsieur RAPHAEL PETRUCCI. To the protracted labours which M. Petrucci devoted to the study of our Ch'ien-fo-tung paintings and their inscriptions between 1911 and 1916 it would be impossible here to do full justice, nor is it necessary to attempt it since a detailed account of them will be found in the initial section of Chap. XXIII dealing with the pictorial remains from the 'Thousand Buddhas'.[34]

Help of M. PETRUCCI.

M. Petrucci's premature death, a severe blow to research in varied fields, prevented the large publication which, as the preliminary scheme reproduced in Appendix *E*, I shows, he had planned on those paintings. The two chapters actually written by him before his last illness, though not completely finished in detail, have been embodied in the same Appendix *E*. After M. Petrucci's death, in February, 1917, his friends MM. Chavannes, Foucher, and Sylvain Lévi kindly charged themselves with the labour of preparing the large essay on the *Maṇḍala* compositions for the press.[35] The same task was accomplished with much care by Mr. A. D. Waley for the chapter dealing with the votive inscriptions.[36] All the same it is obvious that these chapters cannot present the final shape their author would have wished to give them himself. Finally students of Buddhist art will feel grateful to Mr. Laurence Binyon who, from regard for his friend's memory, readily agreed to replace the concluding chapter in M. Petrucci's original programme by his lucid *Essay on the art of the Tun-huang paintings*.[37]

In respect of other classes of art objects, too, I found savants ready to assist with their expert knowledge. The late Professor Sir ARTHUR CHURCH, F.R.S., gave us the benefit of his lifelong researches when supplying in Appendix *D* an analysis of the materials used for mural paintings and stucco relievos at different sites. Professor PERCY GARDNER once again helped us with his wide archaeological knowledge in the determination of intaglios, seal-impressions, etc., showing late classical workmanship or influence. To Professor J. STRZYGOWSKI I am indebted for much stimulating guidance as to the links which are traceable between the ancient art of innermost Asia and that of the Hellenistic Near East. He also very kindly supervised the drawing of some of the plates illustrating the designs of interesting textiles from the 'Thousand Buddhas'. Miss K. SCHLESINGER, from her expert knowledge of the history of musical instruments, kindly furnished instructive notes on those represented in the collection (Appendix *H*). To Mr. REGINALD A. SMITH of the British Museum I am beholden for the detailed examination of the Stone Age implements found in the Lop desert,[38] and to Mr. R. L. HOBSON, the well-known authority on Chinese porcelain, for much useful help with regard to the finer ceramic relics discovered on my explorations.

Collaboration on other art remains.

The late Professor J. VON WIESNER, the distinguished plant physiologist, whose important researches into the development of paper manufacture in Central Asia had been previously served by manuscript finds of my first expedition, made the paper of my Early Sogdian documents the object of painstaking microscopical analysis. It was rewarded by very interesting discoveries as regards the earliest introduction of rag paper.[39] It was through Professor von Wiesner's kindness that the help of his very competent pupil and fellow-worker, Dr. T. F. HANAUSEK, was secured for the microscopical analysis of characteristic fabric specimens from different sites. His results, as recorded in the Descriptive Lists, will certainly prove of value for future investigations into the history of textile manufacture, the spread of cotton cultivation, etc. I must regret that, owing to the death of Professor L. DE LÓCZY and conditions arising from the war, it has not been possible to make accessible here the results of the analysis of the sand samples and other geological specimens collected by me which that eminent authority on the geology of westernmost China had undertaken

Analysis of industrial relics, etc.

[34] See below, pp. 833 sqq.
[35] Reproduced below, pp. 1400–28.
[36] Cf. below, pp. 1394–1400.
[37] See Appendix *E*, IV, pp. 1428 sqq.
[38] See below, pp. 356 sqq., 451.
[39] Cf. below, pp. 673 sqq.

and in part carried out. It was he who first directed my attention to the art remains of the 'Thousand Buddhas', which he had visited in 1879, and the guidance thus afforded I have ample reason to preserve in grateful memory.

Mr. ALLAN's inventory of coins.

If I have left it to the last to mention two particularly valued collaborators from the British Museum, Mr. J. ALLAN and Mr. T. A. JOYCE, it is merely because the materials upon which they have furnished me with important contributions stand apart in well-defined classes. To the former are due the exact notes from which the inventory list of coins in Appendix *B* has been prepared, as well as the selection of the coin specimens reproduced in Plates CXL and CXLI. It is scarcely necessary to point out to archaeologists how valuable for the chronological determination of sites the indications derived from Mr. Allan's notes have been. Equally helpful in a field where the interests of historical study and natural science meet has been the exhaustive treatment which the anthropometrical materials collected by me on my journey have received in Mr. Joyce's *Notes on the Physical Anthropology of Chinese Turkestan and the Pamirs* (Appendix *C*). The accord of the results here arrived at with the conclusions towards which archaeological and linguistic considerations seem to lead us as regards the racial elements in the population of the Tārīm Basin is encouraging for the historical student.

Mr. JOYCE's notes on anthropological materials.

Help of British Museum authorities.

Apart from the special help already mentioned of individual members of the British Museum staff, I owe very grateful acknowledgements for the effective furtherance my labours have received at that great institution. Its Director Sir FREDERICK KENYON, K.C.B., and the Keepers of the Departments directly concerned, Dr. L. D. BARNETT, Sir SIDNEY COLVIN, Sir HERCULES READ, did all in their power to facilitate them by suitable arrangements and useful advice.

The production of this printed record of the results of my explorations has implied great and prolonged efforts. All the more it behoves me to express here my sincere gratitude for the aid which has allowed me to overcome all difficulties, serious as they were. Most of all my gratitude is due for the very liberal arrangements sanctioned by H.M. Secretary of State which rendered it possible to plan this publication on a scale befitting the results secured by the labours in the field, and to adhere to this plan even when the great economic changes intervening since 1914 had rendered its execution far more costly. It was no small boon that whether near or far away in the East I could always rely on the friendly interest and experienced care of Mr. WILLIAM FOSTER, C.I.E., Superintendent of Records, India Office, directly in charge of the publication arrangements.

Printing of *Serindia*.

When the Delegates of the Clarendon Press agreed to undertake the printing of the work, together with the preparation of all the plates (those in colour excepted), I felt assured that whatever technical difficulties might arise owing to the often intricate character of the work or the distance separating me from the Press would be successfully met. Experience has fully justified my reliance on the resources of the famous *officina*, though the changes already referred to have thrown a strain upon them far greater than could be foreseen. To the late Mr. C. CANNAN, Secretary to the Delegates, and Mr. R. W. CHAPMAN, his successor in office, I am indebted for much kind attention. In respect of the colour plates I have to record my special thanks to Messrs. HENRY STONE AND SON, of Banbury, to whose skill and care is due the very successful and true reproduction by three-colour process of selected specimens of ancient art work.

But to no one do I owe greater thanks in respect of the printing of *Serindia* than to my archaeologist friend Mr. J. DE M. JOHNSON. In 1912 he had kindly charged himself, under an arrangement approved by the India Office, with a final revision of my manuscript before it went to the printers and with help in the reading of proofs. When in 1918, in consequence of his appointment as Assistant Secretary to the Delegates, he was obliged to entrust this exacting labour for the most part to the hands of Mr. C. E. FREEMAN, he still continued to use every effort to assure

accuracy and steady progress in the typographical work. It may here find mention that owing to the great distance separating me from the Press it was impossible for me to see more than one proof of Chapters I–VII, printed during 1913, and of Chapter VIII, passed through the press in the autumn of 1919. Even for that one proof the available time was very scanty and the conditions of work, done mainly in camp, not favourable to complete accuracy. This may explain the relative frequency of Errata as shown for this portion of the text in *Addenda et Corrigenda* below.

Help with proofs.

From Chapter VIII onwards the printed form of my work has derived very great benefit from the painstaking attention of Mr. C. E. Freeman, for whose advice, drawn from long literary experience, and self-sacrificing care over an often very irksome task I cannot feel too grateful. My want of Sinologue qualifications added much to the labour of securing uniformity in the transcription (according to Wade's system as adopted in Professor H. A. Giles's great Dictionary) of Chinese names and terms and to that of assuring general correctness in Chinese references. M. Chavannes up to 1913 had rendered me this great service, and subsequently Mr. L. C. Hopkins, I.S.O., the distinguished Sinologist, testified his friendly interest in my work by generously stepping into M. Chavannes' place at a heavy sacrifice of time and labour. To Mr. Hopkins's special competence in matters of Chinese palaeography I had already before been indebted for the reading of certain ancient Chinese seals. Dr. L. Giles has rendered me very willing assistance in the reading of proofs of the chapters dealing with the ancient Chinese *Limes*, while Professor Sylvain Lévi, aided in parts by Mr. A. D. Waley, gave equally kind help for the proofs of the Appendices of our departed common friends, MM. Chavannes and Petrucci. Mr. J. Allan kindly helped me with the proofs of those portions of *Serindia* which deal with explorations on not specifically Chinese ground, his wide Oriental attainments enabling him to offer a series of valuable corrections. Since the pressure of other urgent tasks made it impracticable for me to prepare the *Index* myself, Mr. R. H. New, of the Oxford University Press, was entrusted with this troublesome task under my general guidance. For the painstaking care which he has devoted to it I wish to record my grateful acknowledgement.

The end of the long labours recorded in these volumes finds me far away from beloved deserts and mountains, and the goal by the Oxus, towards which my eyes have been drawn since my youth, still shrouded in the uncertainties of the future. But there is encouragement in the thought of a big task safely accomplished and in hopes shared by kind friends whose care from afar has followed me on all my Central-Asian wanderings and under whose ever hospitable roof this record of past results is concluded.

AUREL STEIN.

23, Merton Street, Oxford:
November 19, 1920.

ADDENDA ET CORRIGENDA

P 2, l. 6. Regarding the deceptive character of the Skr. term *Udyāna* (recte *Uḍḍiyāna*), an *idolum libri*, the important observations of M. Sylvain Lévi, *J. Asiat.*, 1915, xie série, t. v. pp. 108 sqq., should be consulted.

P. 11, note 43. Regarding the phonetic relation between Skr. *Atyugrapura* and *Ariora : Agrōr*, see now Sir George Grierson's note in my paper *Marco Polo's account of a Mongol inroad into Kashmir, Geographical Journal*, 1919, liv. p. 101.

P. 44, note 20, l. 5. *For* Shih-k'i-ni *read* Shih-ch'i-ni.

P. 45, l. 37. *Add footnote:* The following is a specimen of pottery found at *Sanōgharo-nogor* :
Sanoghar. 001. Pottery fr., wheel-made, of dull red colour; contains much stone-grit. Exterior face covered with smooth paste of same colour as body. $3\frac{1}{4}'' \times 2\frac{5}{8}''$.

P. 47, l. 28. *Add footnote:* The following are specimens of potsherds found at Noghōro-dōk, Brep:
Brep. 001. Pottery fr.; gritty ware, dull reddish-grey clay; outside face smoothed over with dull reddish-grey paste. $2\frac{1}{16}'' \times 1\frac{1}{2}''$.
Brep. 002. Pottery fr.; hard grey ware faced outside with very thin slip or glaze of deep orange colour. $2\frac{5}{16} \times 1\frac{5}{8}''$. Pl. IV.

P. 53, l. 16. *For* Maral-bāshi *read* Marāl-bāshi.
l. 34. *For* P'o-le or So-le *read* P'o-lê or So-lê.

P. 54, l. 11. Regarding a glacier pass leading across the Nicholas Range towards Sarhad, see now the remarks in my *Third Journey, Geogr. Journal*, xlviii. p. 216.

P. 58, note 10. *For* Hind Koosh *read* Hindoo Koosh.

P. 60, note 1. *For* Hsiū-mi *read* Hsiu-mi.

P. 66, l. 15. See now my notes on ruined strongholds of Wakhān examined by me in 1915, *Geogr. Journal*, 1916, xlviii. pp. 216 sq.

P. 67, l. 1. *For* szŭ *read* ssŭ.
l. 9. *Add at end of line* (Fig. 25).

P. 68, note 12. *For* Sarūgh-Chupān *read* Sarīgh-chupān.

P. 72, note 25. *Omit note.*

P. 77, l. 24. The exact survey of 1913 showed the Chichiklik-maidān to measure about three miles from north to south, and over two miles across where widest.

P. 80, l. 20 and *passim*. *For* Chiang Szŭ-yeh *read* Chiang Ssŭ-yeh.

P. 85, ll. 20, 22. *For* Kun-lun *read* K'un-lun.

P. 89, l. 26. *For* Karā-kāsh *read* Kara-kāsh.

P. 95, l. 28. *For* Karā-kāsh *read* Kara-kāsh.
l. 31. *Add* (see Fig. 31).

P. 96, l. 14. *Add* (see Fig. 32).

P. 101, l. 43. *For* wu-shu *read* Wu-chu. *The same correction applies to* pp. 159, ll. 10, 13, 15, 20; 197, l. 35; *and passim.*

P. 102. Yo. 01. c. *Add* Cf. Strzygowski, *Kopt. Kunst*, Fig. 50.

P. 109. Yo. 0019, l. 5. *Add* Cf. Strzygowski, *Kopt. Kunst*, Pl. XXII, No. 8987.

P. 103. Yo. 02, l. 8. *Add* Cf. Mi. xi. 00126; xii. 0028, Pl. CXXXVII.

P. 139, l. 13. *Omit* Farhād-Bēg.

P. 159, l. 34. *Add* (see Fig. 45).

P. 163, note 2. *For* his Appendix G *read* Appendix F.

P. 170, l. 44. *Add*: **Kha. i. 50. Paper sketch** showing human figures in different poses. $10'' \times 2\frac{1}{2}''$. Pl. XCI.

P. 194. Kha. vii. 0010. *Add* [But for base, cf. So. a. 007, 008, Pl. CXXXIX].

P. 203, l. 25. *After* Domoko-yār *add* (see Fig. 35).

P. 205, l. 27. *For* M. T. i. 4 *read* M. T. i. 5.
note 6. *For* Yākūb *read* Yakūb.

P. 207, l. 9. *Omit* and Farhād Bēg-yailaki.

P. 209. M. T. 30. *For* Chin. *read* Brāhmī.

P. 212, l. 13. *For* Niña *read* Nina.
l. 17. *After* Ja'far Sādiq *add* (see Fig. 44).

P. 213, l. 20. *For* Sāduk *read* Sadak.

P. 216, l. 9. *Add footnote*: For objects with closely corresponding decoration, cf. Strzygowski, *Kopt. Kunst*, pp. 156, 172.

P. 219, l. 20. *For* Hsiao-wan *read* Hsiao-yüan.
note 14. *For* effected *read* affected; *for* Yailiki *read* Yailaki.

P. 223. l. 11. *For* Sāduk *read* Sadak.

P. 234, l. 4. *Add note 22:* [But see now pp. 1254 sq. for evidence indicating a date earlier than the eighth century A.D. for the abandonment of the Farhād-Bēg-yailaki Site.]
l. 21, marg. *For* N. XXIV *read* N. XXVI.
l. 28. *Add* (see Fig. 60).

P. 240, l. 24. *For* east *read* west.

P. 242, l. 34. *For* ten *read* eleven.
note 7. *For* Ho chuan *read* Huo-ch'üan.
For two Wu-shu *read* six Wu-chu.
note 8. *For* Ho chuan *read* Huo-ch'üan.

P. 248. N. XIII. i. 001, l. 10. *Add* Cf. Strzygowski, *Kopt. Kunst*, p. 154, Fig. 226.

P. 252. N. XIV. iii. 0027. *For* Tarīgh *read* Tārīgh.

P. 253. N. XXII. 003. *Add* See Appendix *H*.

P. 283, l. 32. *For* Elaeagnus *read* Eleagnus.

P. 286, note 1. *For* chêng *read* ch'êng.

P. 289. E. 005, l. 5. *For* $\frac{3}{16}''$ *read* $1\frac{3}{16}''$.

P. 291. E. Fort. 001. a. *Omit* Pl. XXXVIII.

P. 305, l. 5. *Add* (see Fig. 86).

P. 307, l. 11. *For* Chün-chou *read* Chin-chou.

P. 308, l. 6. *For* orchard *read* arbour.
l. 19. *For* Chün-chou *read* Chin-chou.

P. 314, note 9, l. 1. *For* Bash-Royumal *read* Bāsh-Koyumal.
l. 6. *For* sides *read* sites.

P. 326, l. 20. *For* 扦 *read* 扜.

P. 349, note 5. *For* Chap. XIII. sec. ix *read* Chap. XII. sec. vii.

P. 356, l. 29, marg. *For* Stones *read* Stone.

P. 357, l. 22. *For* 0075 *read* 0045.

P. 374, l. 25. *For* $\frac{13}{16}''$ *read* $1\frac{3}{16}''$.

P. 385, l. 13. *For* Ho-ch'üan *read* Huo-ch'üan.

P. 386, l. 26. *For* 0025 *read* 0024.

P. 397, l. 25. *For* motives *read* motifs.
l. 27. *For* L.B. II. 0013 *read* L. B. V. 0013.

P. 398, l. 11. *For* L. B. II. 0014 *read* L. B. 0014.
l. 25. *Add note:* See also below, p. 1222, Mi. xxiii. 0013, 0019–22.

P. 404, l. 8, marg. *For* L. A. *read* L. B.

P. 413, note 21[a]. Mr. L. C. Hopkins writes: 'I venture to think that in this instance Chavannes' translation of the text is not quite accurate. If we refer to No. 750, we see that he renders the same four characters 謹 案 文 書 by "avec respect, conformément au texte écrit". But in No. 754 he translates, "Je constate avec respect ceci: la lettre officielle (a été envoyée, etc.)". But I believe the first rendering is right, and that this passage should run, "in respectful accordance with the written Dispatch, (the writer) had previously reached Lou-lan, etc.".'

P. 432. L. A. 00174. a–e. *For* a–e *read* a–f.

P. 445. L. B. IV. ii. 0010–12. *For* L. A VI. ii. 0024 *read* L. A. VI. ii. 0020.

P. 465, l. 24. *For* M. viii. 0012 *read* M. I. viii. 0012.

P. 470, ll. 15, 16. *For* Byeu-ling *read* Byen-gling.

P. 559, l. 10. *Add note*: [See below, pp. 716, 1098].

P. 598, l. 12. *Add note 2*[b]*:* [Specimens of inscribed wooden tablets from my finds of 1906–8 have been microscopically examined by Dr. A. Bergerstein in his paper: *Materielle Untersuchung der von den Chinesen vor der Erfindung des Papiers als Schreibstoff benützten Holztäfelchen* (Sitzungsberichte der Kais. Akad. der Wiss., Wien, Philos.-histor. Klasse, 1912, vol. clxx. Abh. 8). In one of the specimens he has recognized the wood of a coniferous tree, *Pseudotsuga Douglasii*, but belonging to an as yet unknown variety. In other specimens his analysis has proved the use of poplar, tamarisk, and willow wood.]

P. 601, l. 3. Dr. Giles points out to me that Mr. Hobson's researches have proved the beginning of porcelain manufacture to date back to T'ang times, if not earlier; cf. Hobson, *Chinese Pottery and Porcelain*, i. chap. XI.

P. 620, l. 21. *Add note*: [But for distance, cf. below, p. 1331, l. 2.]

P. 624, l. 6. For *T'u shu chi ch'êng* read *Ch'ing po tsa chih.*

P. 667, l. 24. *See Add.* to p. 601.

P. 676, l. 23. *For* Tatianus *read* Titianus.

P. 683, note 2[a]. *For* protected camp *read* protective camp (Dr L. Giles).

P. 689, l. 38. *Add note*: Mr. L. C. Hopkins suggests as regards Doc. No. 378 that *Hou* ? ? may rather be the surname and two personal names than a title.

P. 705, note 3. *For* T'oung-pao, p. 533 *read* T'oung-pao, 1905, p. 533.

P. 716, note 8. *Add:* [Dr. L. Giles points out to me that the name in question is shown by the facsimile of the MS. to be written as 河 倉 Ho-ts'ang.]
note 10. *Add:* as to the approximate value 1 *li* = $\frac{1}{5}$ mile, see also references to pp. 734 sq., 1098.

P. 723, note 3. For a critical translation of Chang Ch'ien's Memoir with very valuable annotations, see now Prof. F. Hirth's *The story of Chiang K'iên*, in *J. A. O. S.*, vol. xxxvii.

P. 725, l. 5. *For* Chang-yeh *read* Chang-yi.

P. 730, l. 13. *For* Chü-li *read* Ch'ü-li.

P. 753, note 5. Mr. L. C. Hopkins writes: 'In this case I do not think M. Chavannes' translation is quite correct. The meaning of *chü* is "torch" simply. It is explained in the *Shuo Wen* as "to bind reeds and burn". The only sense in literature or colloquial is "torch". In the passage quoted by Chavannes from the "text of T'ang times", there is no word implying "in succession", and the translation is literally, "when they lit fire-signals, there were one torch, 2 torches, 3 torches, 4 torches, in accordance as, etc." That is, the number of separate flames visible showed the relative urgency of the alarm.'

P. 758, l. 9. For interesting comments on the equipment of soldiers mentioned by our Han Limes documents, cf. Laufer, *Chinese Clay Figures*, p. 189.

P. 822, l. 14. Dr. L. Giles remarks: '*San chieh* 三 界 is the Sanskrit Trilokya, and is correctly to be translated "Three Regions" (of desire, form, and formlessness). The name is not likely to have any connexion with the modern "Upper, Middle, and Lower Temples".'

P. 828, l. 1. Dr. L. Giles writes: 'I find the high-water mark in paper and calligraphy to coincide with the Sui dynasty (589–618 A.D.). There is already considerable falling off by the eighth century.'

P. 834, l. 33. *For* Prof. De Vissers' *read* Prof. De Visser's.
note 8, l. 1. *For* M. Chavannes *read* Mr. A. D. Waley and M. Chavannes.

P. 844, note 12. *Omit* liv. 005, Pl. CVI.

P. 855, note 50[a]. *Add:* Miss F. Lorimer calls attention to an elaborate account of this episode given in the *Abhiniṣkramaṇa-sūtra* (transl. Beal), pp. 41 sqq.

P. 858, l. 12 and *passim*. *For* Śuddhodhana *read* Śuddhodana.

P. 860, note 80. *For* Western Paradise *read* Buddhist Paradise.

P. 864, note 17, l. 5. *Add* 00116 *after* 00112–13.

P. 869, l. 13. *For* in the *read* in these.

P. 873, note 20, l. 4. *Add*: See also Ch. 00468; xxiii. 001; xxxiv. 004.
note 28, l. 2. *For* Vaiśravaṇa *read* Dhṛtarāṣṭra.

P. 880, note 19, l. 10. *For* Pi-mo *read* P'i-mo.

P. 901, note 23. *Add* 510 *after* 483.

P. 918. Ch. 6, l. 7. *For* Taki *read* Yabuki.

P. 923, note 23[a]. Dr. Haneda thus translates the colophon: 'In the tenth year of Chü Ching, the tiger year, 至正十年寅歲 (A.D. 1350), on the fourth day of the sixth month, Khulutmak who is living in the city of Üch-lük-chüg (?) copied (this) by the order of Asudai-oghul who has newly learned (the doctrine of Buddhism?) and is governor of Salïgh (-Uighur). Sādhu! ädgü (good).'

P. 925. Ch. 00287, *Add at end* Pl. CLXV.
Ch. xix. 003. *See above, note 23[a] added to p. 923.*

P. 929, l. 28. *Omit* but.

P. 939. Ch. 0010, l. 10. *For* is certain *read* is not certain.

P. 945, r. col., l. 18. *For* ball-shaped *read* bell-shaped.

P. 952. Ch. 0065, l. 14. *Add* 00481 *after* 00364.

P. 960, l. col., last line. *For* women *read* woman.

P. 969, r. col., l. 14. *For* in long *read* along.

P. 970. Ch. 00167, l. 4. *For* A.D. 922 *read* A.D. 972.

P. 972. Ch. 00174. a. *Add at end* Ch. 00174. b, a similar silk fr. Pl. CXII.

P. 977, r. col., l. 39. *Omit* one.

P. 982, r. col., l. 3. *For* Ch. 00234. a–d *read* Ch. 00234. a–e.

P. 994, r. col., l. 38. *For* Dharmatrātā *read* Dharmatrāta.

P. 996, r. col., l. 38. *For* 1" *read* 1'.

P. 1001, l. col., l. 1. *For* complete *read* composite.

P. 1006, l. col., l. 13. *Add* not *after* pattern.

P. 1019, r. col., l. 36. *For* black *read* blank.

P. 1022, l. col., l. 17. *For* xxii. 001. a *read* xxxii. 001. a.

P. 1026, l. col., l. 12. *For* fig. *read* fr.

P. 1029, l. col., l. 30. *For* roll of *read* roll or.
l. col., l. 50. *For* black or *read* black on.

P. 1032, l. col., l. 36. *For* strapped *read* stepped.

P. 1037, l. col., l. 1. *For* Inscr. *read* Inscribed part.

P. 1041, l. col., l. 49. *After* Śākyamuni *add* (but see below, p. 1420, where M. Petrucci takes the Buddha to be Bhaiṣajyaguru).
r. col., l. 20. *For* one armed king . . . attends *read* two armed kings . . . attend.

P. 1044, r. col., l. 22. *For* women's *read* woman's.

P. 1047, l. col., l. 22. *For* seen *read* same.

P. 1049, r. col., l. 16. *For* rest *read* rank.

P. 1050, r. col., l. 39. *For* (only instance of this in the Collection) *read* (for other instances of blue eyes, see Ch. xx. 001; xxxvii. 002).

P. 1051, r. col., l. 52. *For* neither scene *read* scene (2) not.

P. 1052, r. col., l. 5 and *passim*. *For* Marīcī *read* Mārīcī.
r. col., l. 44. *For* skull-cap *read* skull-cup.

P. 1053, l. col., l. 5. *For* taper-like *read* Tapir-like.

P. 1055, r. col., l. 14. *For* bend *read* band.
r. col., l. 41. *For* edge jacket, *read* edge of jacket;.

P. 1060, r. col., l. 30. *For* for which *read* from which.
r. col., l. 35. *For* animal *read* animals.

P. 1063, l. col., l. 53. *For* Encounter *read* Encounters.

P. 1078, l. col., l. 52. *For* ball *read* bell.

P. 1080, l. col., l. 14. *For* ogre *read* ogee.

P. 1084, l. col., l. 35. *For* stand *read* figure.

P. 1088, l. col., l. 1. *For* painted *read* printed.

P. 1094, note 4. An-hsi. 001. *For* flared *read* fired.

P. 1170. H. a. i. 0013 *to be corrected into* H. A. i. 0013.

P. 1174, l. col., l. 40. *For* hips *read* hip.

P. 1175, l. col., l. 51. *For* ix *read* xi.

P. 1197, l. 19. *For* M. xiv. 003 *read* Mi. xiv. 003.

P. 1210, r. col., l. 35. *For* fixed *read* fired.

P. 1216, l. 42. *For* hand *read* hands.

P. 1220, l. col., l. 53. *For* pen-shaped *read* fan-shaped.

P. 1222, r. col., l. 27. *For* fixing *read* firing.

P. 1246, l. 40. *For* clumps *read* lumps.

P. 1262, r. col., l. 5. *For* 16 *read* 18.

P. 1295, r. col. *For* sewn *read* sawn.

P. 1306, note 9, l. 2. *For* No. 25 *read* No. 26.

P. 1313, r. col., l. 22. *Add* Gr. M. $1\frac{3}{8}''$.

Plate XII. *For* Mi. vii. 0022 *read* Mi. vii. 0025.

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CHAPTER I

ACROSS SWĀT AND DĪR

Section I.—ALEXANDER BETWEEN KŪNAR AND INDUS

EVER since, in the summer of 1904, the plan of my second Central-Asian journey had been definitely formed and submitted to the Government of India, I was eagerly bent upon effecting my entry into Chinese Turkestān by a new route. It was to take me from the Indian administrative border near Peshawar, through the Pathān tribal territory of Swāt and Dīr into Chitrāl, and thence across the main range of the Hindukush to the uppermost Oxus Valley and the Afghān Pāmīrs. The attractions of this route were great for the student of early geography and ethnography, but great also the difficulties, largely political, which now practically close it to the European traveller. So I had special reason to feel glad when, after final sanction of my start on this expedition had reached me about the New Year of 1906, I succeeded, through the Indian Foreign Office, in obtaining permission from H.M. Habīb-ullah, King of Afghānistān, to cross a portion of his territory not visited by any European since the days of the Pāmīr Boundary Commission. My lamented chief, Colonel Sir Harold Deane, K.C.S.I., then Chief Commissioner of the North-West Frontier Province, had already kindly agreed to my passing through the northernmost of the Marches of which he was so truly great a Warden. Choice of route to Pāmīrs.

However interesting the regions were through which this route was to take me on my way to the Chinese frontier, a series of practical considerations, fully explained in the opening chapters of the personal narrative of my journey, obliged me to make my passage as rapid as possible. Owing to the formidable obstacle presented by the Lowarai Pass, then deeply buried under snow and very difficult to cross with baggage, my start from the Peshawar border proved impossible until April 27, 1906. Once *en route* I had the strongest reasons for guarding against any avoidable delay; for if I could not reach the headwaters of the Chitrāl River before the close of May, I should run a very serious risk of finding its narrow uppermost gorges above Mastūj, which give access to the Oxus watershed on the Barōghil, closed completely to traffic by the melting snows. The rapidity of the progress thus imposed upon me is sufficiently illustrated by the fact that the marching distances covered within the month which brought me from the Peshawar border to the Chinese boundary on the Pāmīrs, amounted to an aggregate of close on 450 miles. Most of this marching was done over difficult mountain tracks and at a season of exceptionally heavy snow. Start from Peshawar border.

It is obvious that under such conditions of travel I was compelled here to restrict my antiquarian and ethnological observations to what, as it were, could be picked up by the roadside. Nevertheless, I need not hesitate to commence the detailed account of my archaeological work from my journey over this ground; for apart from the intrinsic interest of a region which has only recently and in parts become accessible to European researches, there is the broad fact that most of our historical knowledge about it is derived from the same Chinese sources to which we are indebted for all the essential facts concerning ancient Central Asia.

Ancient names of Swāt.

My journey was to take me not only to distant regions but also far back in the ages. So it was doubly appropriate that its very first stages should lead over ground so full of ancient associations as the Swāt Valley (Fig. 1). The name of the river *Suvāstu* from which the main valley with the adjoining territory derives its present designation, is already found in the Rigveda and Mahābhārata,[1] and figures with scarcely a change also in Megasthenes' *Indika* as well as in Ptolemy's *Geographia*.[2] The old Sanskrit name of the territory, *Udyāna*, is often mentioned in classical texts from the Mahābhārata downwards. On account of the many legends about Buddha's life which popular tradition has placed in the Swāt Valley, as in the neighbouring Gandhāra, it figures still more frequently in the literature of Northern Buddhism. But the total absence of definite topographical or historical data, which characterizes these quasi-indigenous references, makes it needless to discuss them here in connexion with the ancient geography of the territory.

Swāt in Alexander's Indian campaign.

Information, scarcely more definite, is derived from the earliest foreign records of this region found in the accounts of Alexander's Indian campaign. It is true that on general geographical grounds it may be taken for certain that the Macedonian's march of conquest through the mountains north of the Kābul River, which Arrian and Curtius describe at length, must have brought his columns into Swāt and the chief valleys immediately adjoining it. But the accounts of the two historians mentioned and other abstract notices surviving in classical texts, show uniform vagueness in regard to those data which might help us to follow Alexander's operations on the map or to form a clear idea of the political and economic conditions prevailing. Even in respect of those incidents like the siege of Massaga or the capture of that famous rock fortress, Aornos, which on account of their romantic interest receive frequent, and in some sources elaborate, notice, the want of exact topographical indications leaves little hope that the sites will ever be identified with any certainty.[3]

Alexander's operations north of Kābul R.

The extant records of this portion of Alexander's Indian campaign have been discussed so

[1] See Lassen, *Ind. Alterthumskunde*, ii.[2] p. 140; R. V. VIII. 19. 37; Mahābhārata, vi. 333. Cf. Roth, *Nirukta, Erläuterungen*, p. 43; Zimmer, *Altindisches Leben*, p. 18; Ludwig, *Der Rigveda*, iii. p. 200; *Imperial Gazetteer of India*, xxiii. p. 187; Macdonell and Keith, *Vedic Index of Names and Subjects*, ii. p. 460; V. de Saint-Martin, *Étude sur la géographie d'après les hymnes védiques*, p. 53.

[2] Ptol., *Geographia*, VII. i. 26, 27, names the Σοὐαστος rightly as an affluent of the Κώας or Kubhā (**Kuvā* in its Prākrit form), i.e. the Kābul River. Megasthenes (see Arrian, *Indika*, iv. 11) mentions the Σόαστος as a tributary of the Kōphēn (Kōphēs) or Kābul River and along with it, as another tributary, the Γαρροίας. There can be no doubt that by the latter is meant the same river which in Arrian's account of Alexander's campaign north of the Kābul River valley figures under the name of Γουραῖος. It was long ago rightly identified with the Panjkōra which unites from the north with the Swāt River before its entry into the Peshawar Valley. See Marquart, *Geschichte von Eran*, ii. pp. 244 sqq., where the ancient notices concerning the drainage of the Kābul River have been examined with critical care. The *Guruhā* or *Garuhā*, mentioned in Varāhamihira's Bṛhat-saṁhitā (xiv. 23), and the *Gaurī*, which the Mahābhārata names along with the Suvāstu, are other early designations of the Panjkōra (Kern; Lassen, loc. cit.).

It appears very probable that the Panjkōra is meant also by the river Choaspes which Curtius mentions in a position corresponding to that of Arrian's Guraios (VIII. x. 21–2). Another reference to the Choaspes is found in a passage of Strabo's Geography, xv. 26, p. 697, which states that it 'flows into the river Kophes ... after traversing Bandobene and Gandaritis'. The mention here made of Gandaritis, i.e. Gandhāra, renders it clear that the river intended is the Panjkōra, which after its junction with the Swāt River enters the Peshawar Valley and flows into the Kābul River (Kophes) near Chārsadda.

The fact that the united stream is still known by the name of Swāt, as apparently in antiquity, lends support to Dr. Marquart's plausible explanation of *Choaspes* = **hu-aspa* 'having good horses', as an Iranianized rendering of the Sanskrit name Suvāstu. (For other rivers bearing the Iranian name Χοάσπης, Av. *hvaspa*, see my note 'Afghānistān in Avestic geography' in *Academy*, May 16, 1885, p. 349.) The transformation of the river name *Vitastā* by a similar 'popular etymology' into Ὑδάσπης = **vida-aspa*, 'gaining horses', offers a close parallel. For ingenious attempts to explain the name Bandobene and the references to certain towns which Strabo's passage mentions in connexion with the Choaspes, see Marquart, loc. cit., pp. 245 sqq.

[3] For the difficulties besetting the identification of the site of Aornos, cf. my *Report on Archaeological Survey work in the N. W. F. P. and Baluchistan*, 1905, pp. 19 sqq.

often and so closely[4] that no detailed exposition of the events and of the varying views set forth regarding them by different commentators seems called for here. It will suffice to mention the few points which appear to me to be fairly established, and which possess interest for the archaeological student of this territory. To any one conversant with the modern geography of the mountainous regions flanking the valley of the Kābul River on the north, it must be evident *a priori* that the operations carried on by Alexander against populous tribes and towns on his way from the upper Kābul Valley to the Indus, must have had for their main fields those tracts which by their configuration and fertility are capable of maintaining a relatively large population. These alone would be of real importance for a conqueror anxious to secure the left flank of the great route from Kābul to India. Now of such tracts there are four which deserve special attention: the lower valley of the Kūnar or Chitrāl River extending from near Jalālābād to Asmār; the complex of fertile valleys known as Bājauṛ; the open middle part of the main Swāt Valley, between Manglaur and Tōtakān; and finally the central valleys of Bunēr.

Alexander in Bājauṛ and Swāt.

It is in the westernmost of these tracts, the lower Kūnar Valley, that we may safely locate the operations which Alexander at the commencement of his mountain campaign carried on against various towns by 'the river called Khōēs', and against the hill tribe of the Aspasians.[5] The territory which he next invaded after crossing the mountains was in all probability Bājauṛ. The mention of the river Guraios or Panjkōra which Alexander crossed on leaving it, and before attacking the country of the Assakēnoi, points to this identification. As regards the Assakēnoi, it is clear that the seats of this formidable nation comprised the present Swāt territory and probably also the adjoining Bunēr; for the operations needed for their subjugation extended from the Guraios

[4] Among the more noteworthy interpretations, cf. Ritter, *Über Alexander's Feldzug im Indischen Kaukasus*, pp. 141 sqq.; Lassen, *Ind. Alterthumskunde*, ii.[2] pp. 124 sqq.; V. de Saint-Martin, *Étude sur la géographie grecque et latine de l'Inde*, in *Mémoires présentés par divers savants à l'Académie des Inscriptions et Belles-Lettres de l'Institut Impérial de France*, Série i, vol. 5, p^tie^ 2, 1858, pp. 20 sqq.; Cunningham, *Ancient Geography of India*, pp. 62, 63; V. Smith, *Early History*[2], pp. 47 sqq.

[5] Arrian, *Anabasis*, iv. 23, 24. Cf. V. Smith, *Early History of India*[2], p. 48, where the main topographical indications are quite correctly brought out.

The operations on the upper Kūnar must have brought the Macedonians very close to the southernmost of the valleys which have been occupied since early Muhammadan times by the hill tribes known under the common designation of Kāfirs. There are reasons for believing that these tribes whose resistance to their more civilized neighbours south has been finally overcome only within the present generation, have had their seats there from far more ancient times. Their wine-drinking habits, noted at length by Bābur (*Memoirs*, translated by Leyden and Erskine, pp. 144, 248 sq.), have survived to this day.

The suggestion was long ago thrown out that it was contact with early representatives of this autochthon hill population which originally gave rise to those fanciful stories about the city of Nysa, founded by Dionysos, which figure so prominently in all accounts of this initial portion of Alexander's Indian campaign. Arrian, who reproduces these stories with manifest critical misgivings (*Anab.* v. 1, 2) purposely keeps them distinct from the account of the military operations preceding Alexander's crossing of the Indus and thus furnishes no topographical indication. But Curtius, viii. 10, and Justin's extracts from Pompeius Trogus, xii. 7, distinctly place the visit to Nysa and its sacred Mount Meros between the operations against the Aspasians and those which brought Alexander into the region identified here with Bājauṛ.

From an historical point of view the stories about this Indian Nysa are of interest only as affording a particularly clear instance of the process by which the early growth of 'the Alexander legend' was fostered in all probability during the campaign itself and under official auspices. Eratosthenes, the clear-sighted scholar, was fully aware of this when he stated (as quoted by Arrian with special reference to Nysa) 'that all these references to the deity were circulated by the Macedonians in connexion with the deeds of Alexander, to gratify his pride by grossly exaggerating their importance' (*Anab.* v. iii; McCrindle, *Invasion of India*, p. 82).

It seemed, however, worth while to call attention here to the plain evidence supplied by the records as to where this fanciful story was localized; for a conjectural identification which would bring Nysa to the south of Bājauṛ and close to the lower course of the Swāt River, has found more ready acceptance than is justified by the evidence adduced in its support. This rests mainly on the deceptive similarity between the name of the peak Koh-i-Mōr (or Mohr) and the Greek designation 'Mount Mēros' (cf. V. Smith, *Early History*[2], p. 49).

or Panjkōra to the Indus. Arrian gives a fairly detailed account of the several large towns in which their defence was chiefly organized; but in the absence of any definite topographical indications or archaeological clues it seems useless at present to hazard conjectures as to the position of Massaga, the capital, of Bazira, Ora or Dyrta, or of the rock-fortress of Aornos.[6]

Strategical importance of Chakdara on Swāt R.

Fortunately, where historical records are lacking, geography affords guidance in at least one important point. No one familiar with the ground can doubt—and a reference to recent survey sheets will conclusively prove it for others—that in ancient times as at present the direct route, and the only one of any importance, connecting Bājaur with Swāt, must have led from the Panjkōra across the easy Kātgala Pass down to where the present fort of Chakdara guards the strategically important crossing of the Swāt River. Thus when on April 28, 1906, I made my first march from Chakdara past Uch and Kātgala and along the open Talāsh Valley to Sado on the Panjkōra,[7] I could feel reasonably sure that the broad military road I was following led me over ground which more than twenty-two centuries before had seen the Macedonian columns pass by in the inverse direction.

Alexander's crossing of Swāt range.

The crossing of the Swāt River at Chakdara derives additional importance from the fact that just opposite to it there debouch into the riverine plain two much-frequented routes which traverse the range separating Swāt from the Peshawar Valley by way of the Shāh-kōt and Charāt Passes. The antiquity of the routes is abundantly proved by the massive remains of roads, undoubtedly of pre-Muhammadan date, which lead up to the passes.[8] These routes certainly offered the most direct, and until the modern strategic road across the Malakand was made, also the easiest access from Swāt to the plains of Gandhāra. But whether Alexander for his descent thither before the attack on Aornos used one of these,[9] or chose rather one of the routes leading through Bunēr to the south-east, it is impossible to decide from the available *data*.

Early ethnography of Swāt region.

As regards the ethnography of the region through which Alexander's hill campaign took him, it is impossible to assert more for certain than that the invaders classed the inhabitants as Indians. This agrees well with what we know from later records, textual and epigraphical, about the Indian character of the civilization and religion prevailing throughout the Kābul Valley before the Muhammadan conquest. As to the racial character of the contemporary inhabitants it would scarcely be safe to express any opinion, seeing how limited is even our present knowledge about the anthropology of that great portion of the hill population which does not belong to the latest stratum of invaders, the Pathāns. But as regards its linguistic affinities we are on somewhat safer ground. Recent researches, of which the merit belongs mainly to Sir George Grierson, have demonstrated the fact that the languages now spoken in the valleys south of the Hindukush, from the Dard tracts north of Kashmīr to Kāfiristān, belong to an independent group of the Aryan language, being neither of Indian nor of Īrānian origin.[10] There are reasons which make it probable that the area covered by this group in times preceding the Pathān invasion extended a good deal further south along the Indian North-West Frontier.[11] Hence it is of interest to note

[6] See above, p. 2 and note.

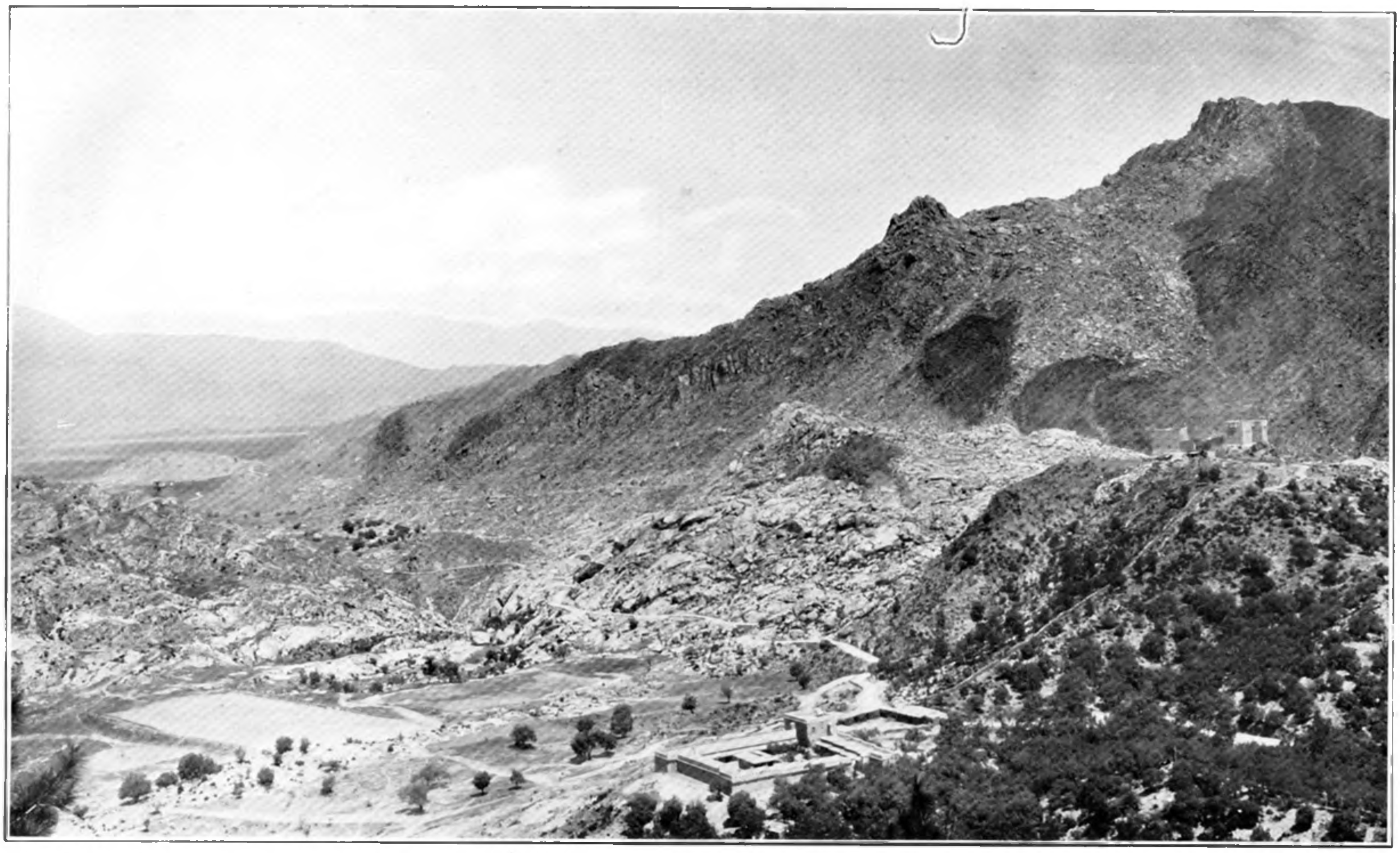
[7] See *Desert Cathay*, i. pp. 15 sqq.

[8] See Sir H. Deane's *Note on Udyāna and Gandhāra*, *J.R.A.S.*, 1896, p. 671 sq.; Foucher, *Géographie ancienne du Gandhāra*, p. 40; Stein, *Archaeological Survey Report, Frontier Circle*, 1911–12, p. 6.

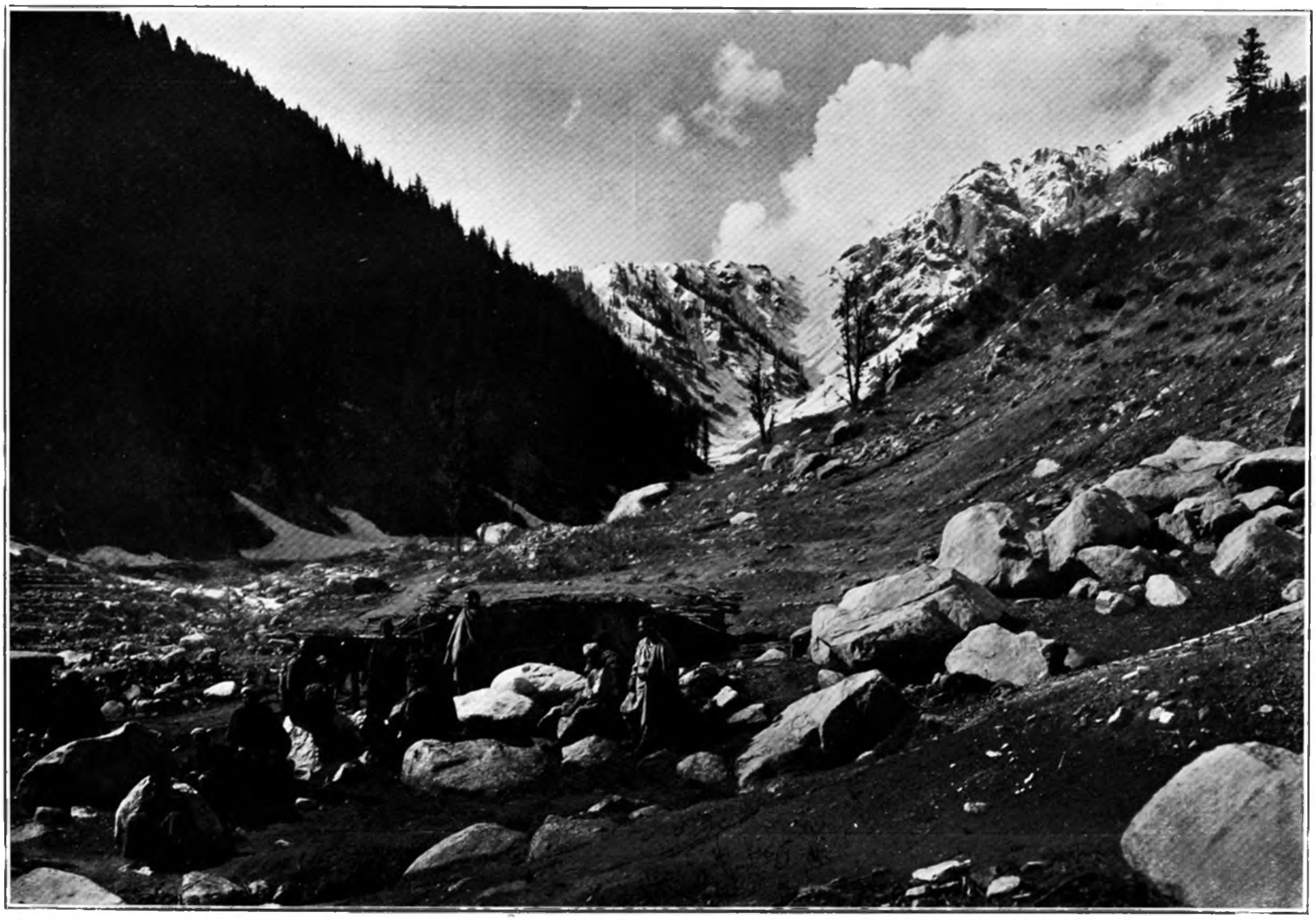
[9] Mr. V. Smith thinks it probable that Alexander used the Shāh-kōt Pass; see *Early History*², p. 53.

[10] See especially his work *The Piśāca languages of North-Western India*, pp. 3 sqq. Acceptance of this linguistic fact need not prejudice the question whether the application of the half-mythological term *Piśāca* to the race or races speaking languages of this group can be justified on a philological or historical basis. For Sir G. Grierson's latest views on this, to me rather doubtful, question, see his paper *Paiśācī, Piśācas and 'Modern Piśāca'*, *Z.D.M.G.*, 1912, pp. 49 sqq.

[11] The little-known dialects of Tirāhī, once spoken in the Afrīdī hills, and Dīrī surviving in the mountains of Dīr, near the Panjkōra headwaters, belong to this group; see Grierson, *Piśāca Languages*, p. 6.



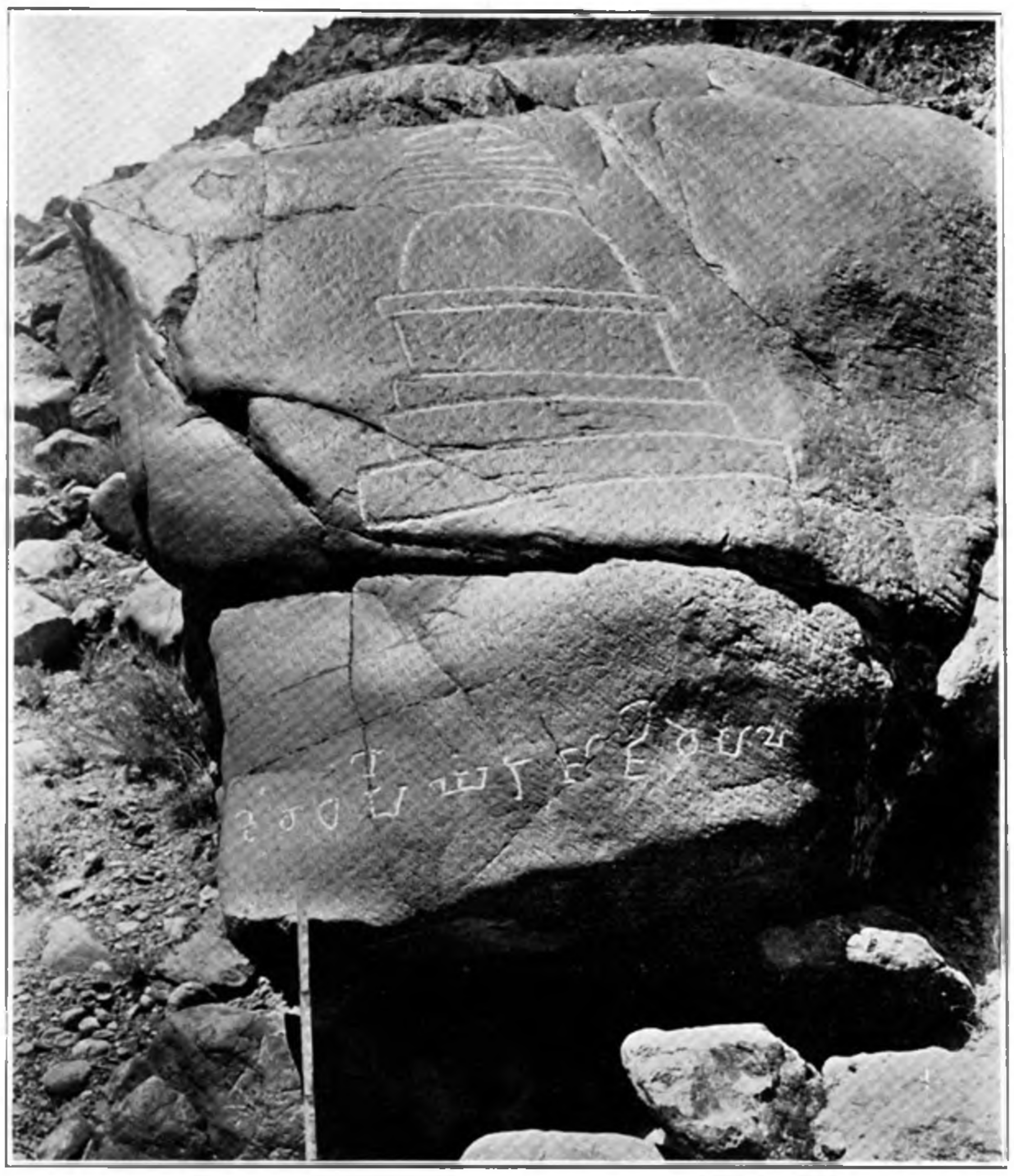
1. VIEW NORTH-EAST FROM FORT MALAKAND ACROSS SWĀT VALLEY.
Crater Camp site in foreground with road leading towards Chakdara.



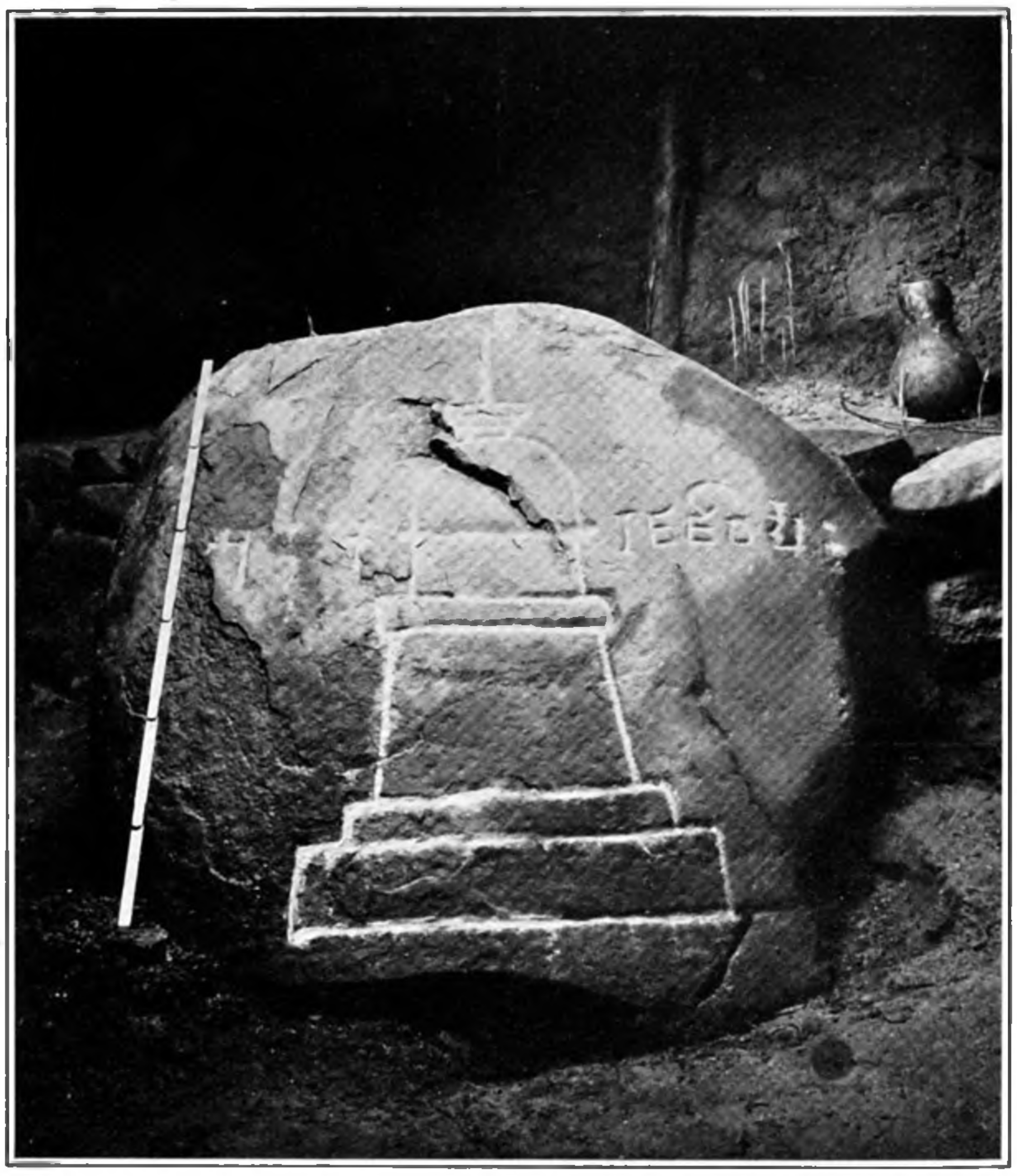
2. VIEW OF LOWARAI PASS FROM GUJAR POST, ABOVE DĪR.

3. RUINED TEMPLE, GUMBAT, TĀLĀSH VALLEY.

4. RUIN OF KARWĀN-BALASI NEAR BOZAI-GUMBAZ, LITTLE PĀMĪR.



5. ROCK-CARVING OF STŪPA WITH INSCRIPTION, PAKHTŌRĪDĪNĪ, CHITRĀL.



6. BOULDER WITH REPRESENTATION OF STŪPA AND INSCRIPTION NEAR CHARRUN, MASTŪJ.

that the main tribal names recorded in this region by Alexander's historians show a phonetic change which is a characteristic feature in this language group and one attested from a period as early as Alexander's campaign. Both the names *Aspasioi* and *Assakēnoi* undoubtedly correspond to the Sanskrit *Aśmaka*, a name mentioned by Varāhamihira among tribal designations of the Indian North-West.[12] This conversion *śm* > *sm* > *sp* > *ss* > *s* is typical, and can be already traced in the language of Aśoka's Gandhāra inscriptions, which Sir George Grierson has proved to have been greatly affected by the influence of what he calls the 'Modern Paiśācī languages'.[13]

Section II.—EARLY CHINESE PILGRIMS TO UDYĀNA

Udyāna under Indo-Scythian rule.

No distinct references to Udyāna can be traced in the extant records of that long and fascinating period in the history of the Indian North-West border during which the Kābul Valley with the adjacent territories passed from Alexander's immediate heirs successively under the domination of the great Mauryan empire, the Greek kings from Bactria, and the short-lived dynasties of 'Scythian' or Parthian origin to become finally the main seat of the powerful kingdom established by the Kuṣana branch of the Great Yüeh-chih or Indo-Scythians. There is reason to believe that much of the 'Graeco-Buddhist' art remains which the Buddhist ruins of the Swāt Valley, like those of Gandhāra, have preserved in abundance, dates back to the early centuries of our era when Buddhism was especially flourishing in these parts under Kuṣana rule. But among the archaeological 'finds' so far recorded there is nothing to throw light on the special conditions prevailing in Udyāna at that period.

Fa-hsien's visit to Udyāna.

It is towards the close of the period of Kuṣana domination that we first receive information about Udyāna from one of those Chinese Buddhist pilgrims who are the safest guides for the ancient topography of the Indian North-west. It is furnished by the narrative of Fa-hsien who reached Wu-ch'ang about A.D. 403, from the side of the Pāmīrs. The route which Fa-hsien and his Chinese fellow pilgrims followed presents points of interest, and it is therefore fortunate that by M. Chavannes' convincing identification of *Chieh-ch'a* with Kāshgar all question of his starting-place has been solved.[1] 'From this [Chieh-ch'a] the travellers went westwards towards North India, and after being on the way for a month, they succeeded in getting across and through the range of the Onion mountains. The snow rests on them both winter and summer.'[2] After referring to the dangers encountered here by travellers from 'venomous dragons, which, when provoked, spit forth poisonous winds, and cause showers of snow and storms of sand and gravel',[3] Fa-hsien tells us: 'The people of the country call the range by the name of the "Snow Mountains". When the travellers had got through them, they were in North India, and immediately on entering its borders, found themselves in a small kingdom called *T'o-leih* (*T'o-li*), where also there were many monks, all students of the Hīna-yāna.'

[12] For a synopsis of the classical forms of this name and their derivation, see Marquart, *Geschichte von Eran*, ii. p. 247, note.

[13] See his paper on *Linguistic relationship of the Shāhbāzgarhi inscription*, *J.R.A.S.*, 1904, p. 725; especially p. 729 for *sm* > *sp* > *s*. Cf. also his remarks in *Z.D.M.G.*, 1912, p. 77: 'This change of *sm*, through *sv* or *sb*, to *sp*, and thence to *ss*, *s*, does not occur in any other Indian language, and is typical of "Modern Piśāca".'—It may be noted in passing that this phonetic change helps to explain still better Ptolemy's name *Kaspeira* (pronounced *Kaspīra*) for Kaśmīr; see Stein, *Rājat.* ii. p. 352.

[1] See Chavannes, *Voyage de Song Yun*, p. 54, note 3; Stein, *Ancient Khotan*, i. pp. 28, 48.

[2] See Legge, *Fâ-hien*, p. 24.

[3] Cf. Hsüan-tsang's similar description of the climate encountered in the 'Valley of Po-mi-lo' (the Pāmīrs) with its 'great lake of the dragons', Julien, *Mémoires de Hiouen-thsang*, ii. pp. 207 sq.; Watters, *Yuan Chwang*, ii. p. 282. For the storm-producing powers of 'dragons' or Nāgas, cf. e. g., Julien, *Mémoires*, i. pp. 47 sqq., 133 sq.; my notes on *Rājat.* i. 179, 239.

Fa-hsien's T'o-li or Darēl.

There can be no doubt that the travellers' route lay across the Pāmīrs which the Chinese have known from the time of the Han dynasty as the 'Onion Mountains' or Ts'ung-ling.[4] It is equally certain that the territory of *T'o-li* here mentioned by Fa-hsien is identical with Hsüan-tsang's 'Valley of *Ta-li-lo*' which was long ago located by General Cunningham in the present Darēl on the right bank of the Indus, opposite Chilās.[5] The identity of T'o-li and Ta-li-lo is established by the mention which both pilgrims make of a certain miraculous wooden image of Maitreya there worshipped.[6] The Chinese Ta-li-lo is an exact transcription of the name of Darēl.

Hsüan-tsang's route from Swāt to Darēl.

The indications point unmistakably also to this hill tract in Hsüan-tsang's description of the route followed from Mêng-chieh-li, the capital of Udyāna, which corresponds to the present Manglaur on the Swāt River. 'North-east from Mêng-chieh-li over hills and across gulleys, ascending the Indus by hazardous paths through gloomy gorges, crossing bridges of ropes or iron chains, across bridges spanning precipices or climbing by means of pegs for steps, a journey of above 1,000 li brings you to the Ta-li-lo valley, the old seat of government of Udyāna.'[7] Reference to the Transfrontier Survey sheets shows plainly that the route is meant which leads from Manglaur, still the chief place in Upper Swāt, north-eastwards through the hills of Ghūrband and Kānda to the Indus and then along its tortuous narrow gorge up to Darēl. The greater part of this route through what is known as the Indus Kōhistān has never been properly surveyed, the tribal territory being wholly closed to Europeans. But information gained through native sources makes it abundantly clear that the description given by Hsüan-tsang, and in still fuller detail by Fa-hsien (see below), is borne out by the great natural difficulties of the route. The estimate given by Hsüan-tsang of the length of the journey also agrees well with the evidence of the sketch-maps which are all that is available.[8]

Fa-hsien's route from the Pāmīrs to Darēl.

Though Darēl itself is still inaccessible to Europeans, the information obtained about it through native channels indicates that 'this valley is extremely fertile and well-populated'.[9] The community of Shīna-speaking hill-men which inhabits it, counting some 3,000 fighting-men, until quite recently retained the status of a small republic like others in the Indus Kōhistān. But close relations with the chiefs ruling Yasīn and Punyāl across the mountains northward are attested in the past. The same topographical facts which explain these relations indicate also the route which Fa-hsien is likely to have followed on his descent to Darēl from the Pāmīrs. A number of relatively easy mountain routes connect Darēl on the north with the valley of the upper Gilgit River between Gākuch and Ghizar.[10] The shortest and most direct of these routes crossing the Dodargali Pass leads straight to Gūpis at the mouth of the Yasīn valley, and once in the latter we are on what was

[4] See Stein, *Ancient Khotan*, i. p. 27.

[5] See *Ancient Geography of India*, p. 82; Stein, *Ancient Khotan*, i. p. 6, note 4.

[6] For Hsüan-tsang cf. Julien, *Mémoires*, i. p. 149; Beal, *Si-yu-ki*, i. p. 134; Watters, *Yuan Chwang*, i. p. 239.

[7] See Watters, *Yuan Chwang*, i. p. 239. I have substituted the correct transcription of Hsüan-tsang's name of the Udyāna capital for the fanciful restoration 'Mangkil'. For the identification with the modern Manglaur, see below, p. 13.

[8] Measured on the 'Northern Transfrontier' sheets of the Survey of India the aggregate distance of the route from Mankiāl, the chief place of Darēl, along the Indus to Beshān and thence via Ghūrband to Manglaur amounts to about 140 miles. Considering the exceptionally difficult ground, it is certain that this must be increased by at least one-third in order to arrive at an approximately correct estimate. If Hsüan-tsang did not personally visit Ta-li-lo, as the wording of his *Life* seems to imply (see Julien, *Vie*, p. 88; Watters, *Yuan Chwang*, i. p. 239), he must have secured his information from a very trustworthy guide.

For an account of the Indus Kōhistān and the succession of gorges in which the Indus cuts its way down through the mountains after its great bend near Sazīn, see Biddulph, *Hindoo Koosh*, pp. 3 sqq. On p. 7 the 'good road, much frequented by traders, [which] leads from Ghorbund into the Swāt Valley' is specially referred to.

[9] Cf. Biddulph, *Hindoo Koosh*, pp. 13 sq.

[10] See 'Northern Transfrontier' Sheets, Survey of India, Nos. 2 S.W. and 3 N.W., 4 miles to 1 inch.

already in ancient times, as it is still now, the chief line of communication between the Indus Valley and the Pāmīrs.

Fa-hsien crossed Darkōt Pass.

In my *Ancient Khotan* I have shown how the route which runs up the Yasīn Valley to the Darkōt Pass and thence crosses the Hindukush main range by the Barōghil saddle to Sarhad on the Oxus, was used in A.D. 747 by the Chinese general Kao Hsien-chih for his successful expedition across the Pāmīrs to Gilgit.[11] Below I shall have occasion to discuss the northern portion of this route from personal observation. The fact that it was used in 1895 as the line of progress for the Pāmīr Boundary Commission from the British side sufficiently attests its modern importance.

Fa-hsien's itinerary.

The assumption that Fa-hsien, too, followed this route is strongly supported by the statement already quoted from his narrative that he and his party travelling from Chieh-ch'a or Kāshgar 'succeeded in getting across and through the range of the Onion mountains', i.e. to Darēl, 'after being on the way for a month'. Having personally travelled along the whole of the ancient trade route which leads from Kāshgar across the Tāghdumbāsh Pāmīr to Sarhad and thence by the Barōghil and Darkōt Pass to the head of the Yasīn Valley, I can vouch for the fact that the ordinary stages on this journey, as indicated by the local conditions of travel, which cannot have undergone any material change since ancient days, are reckoned at twenty-four or twenty-five.[12] Adding to these the five marches which, judging from the maps, seem needed for covering the distance between the foot of the Darkōt and Mankiāl, the chief place in Darēl, we arrive exactly at the total which Fa-hsien's itinerary indicates. This agreement deserves attention all the more because there is no other equally short or practicable route between the two points of Fa-hsien's journey.[13]

Fa-hsien's account of Indus gorges.

From Darēl Fa-hsien made his way to Udyāna by the difficult track along the narrow valley of the Indus, and the description which his narrative gives of it is both graphic and consistent with modern accounts of these gorges. 'The travellers went on to the south-west for fifteen days (at the foot of the mountains, and) following the course of their range. The way was difficult and rugged, (running along) a bank exceedingly precipitous, which rose up there, a hill-like wall of rock, 10,000 cubits from the base. When one approached the edge of it, his eyes became unsteady; and if he wished to go forward in the same direction, there was no place on which he could place his foot; and beneath were the waters of the river called the Indus. In former times men had chiselled paths along the rocks, and distributed ladders on the face of them, to the number altogether of 700, at the bottom of which there was a suspension bridge of ropes, by which the river was crossed, its banks being there eighty paces apart. . . . After crossing the river, (the travellers) immediately came to the kingdom of Wu-ch'ang, which is indeed (a part) of North India.'[14]

Though this portion of the Indus Valley below Darēl has never been visited by a European, it is certain that the difficulties presented by the succession of deep rocky defiles in which the great

[11] See *Ancient Khotan*, i. pp. 8 sqq.

[12] This figure is made up as follows: Kāshgar to Tāsh-kurghān via the Chichiklik plateau, eleven or twelve marches (see Forsyth, *Yarkand Mission Report*, pp. 431 sqq.; done by me in six forced marches in June, 1906, as described in *Desert Cathay*, i. pp. 97 sqq.); Tāsh-kurghān to Wakhjīr Pass, five marches; thence to Sarhad five marches, and across the Barōghil to the south foot of the Darkōt three more. Travelling with light baggage some days could easily be saved and utilized for rest at convenient halting-places like Tāsh-kurghān and Sarhad.

[13] As Fa-hsien had gone specially to Kāshgar to attend the great quinquennial assembly held by its king, usually in the spring (see Legge, *Fâ-hien*, p. 22), he was not likely to have reached the Barōghil before the melting snows had closed the route through the Mastūj River gorges for a descent to Chitrāl. It is quite possible that this circumstance determined his choosing the route via Darēl in spite of the increased difficulties subsequently to be faced in the Indus Valley. Otherwise he would have found it far easier to reach Udyāna through Chitrāl and Dir, the route described in my own narrative.

[14] See Legge, *Fâ-hien*, pp. 26, 28.

river has cut its way southwards through the mountains, are quite as great as those which confront the traveller along most of the Indus course between Chilās and Skardo. Hence it is easy to recognize the pilgrim's references to the ladders or 'Rafiks' connecting the narrow rock ledges which are used for the track, and to the rope bridges of birch twigs by which this is taken from one bank to the other.[15] Fa-hsien's specific mention of the rope bridge which he crossed before reaching the territory of Udyāna is confirmed by the map. This shows that the main track along the Indus crosses below Darēl to the left bank and does not regain the right bank until Mirabat, some eight miles above the side valley of Kānda belonging to Swāt.[16]

Fa-hsien's account of Udyāna.

Fa-hsien's general account of Udyāna is brief but shows in strong relief the flourishing state which Buddhism enjoyed at the time of his visit. 'The people all use the language of "Central India", "Central India" being what we should call the "Middle Kingdom". The food and clothes of the common people are the same as in that Central Kingdom. The Law of Buddha is very (flourishing) in Wu-ch'ang. They call the places where the monks stay (for a time) or reside permanently *Sanghârâmas*; and of these there are in all 500, the monks being all students of the Hīnayāna.'[17] The few sacred sites which Fa-hsien singles out for mention appear again in Hsüan-tsang's account of Udyāna. So long as the greater portion of Swāt territory remains inaccessible for an archaeological survey, there can be no opportunity for a systematic treatment of its *topographia sacra*. I shall, therefore, as in the case of the later pilgrims' accounts, be content to mention only those sites for the identification of which reliable evidence has already been given elsewhere.

Sacred spots named by Fa-hsien.

This is fortunately the case with regard to the first sacred spot which Fa-hsien names, where Buddha coming to Udyāna 'left a print of his foot, which is long or short according to the ideas of the beholder'.[18] Hsüan-tsang too mentions the 'large flat stone with the Buddha's footprints, the size of which varied with the religious merit of the measurer'. He places it on the north bank of the Swāt River and thirty li to the south-west of the spring of the Nāga Apalāla, the reputed source of the river, and itself about 250 li to the north-east of Mêng-chieh-li or Manglaur.[19] The latter indication, as first recognized by Colonel Deane, points clearly to the present head of the Swāt River near Kalām,[20] and it may be considered certain that the sacred spot is marked by the inscribed rock or boulder near the village of Tīrath on the border of the Swāt Kōhistān. This shows two large *pādukās*, and below them a brief Kharoṣṭhī inscription in characters of the first century B.C. describing them as the footprints of Buddha Śākyamuni, of which Colonel Deane in 1897 secured paper impressions, subsequently edited by Professor Bühler.[21] The position of Tīrath, moreover, in relation to Kalām, as far as it is known from survey reconnaissances, corresponds accurately enough to Hsüan-tsang's description. It is in the same vicinity that 'the rock on which he (Buddha) dried his clothes' may be located with great probability; for Hsüan-tsang places some '30 li farther down the river' from the site of the miraculous footprints 'the rock on which Buddha had washed his robe, the lines of the robe being still distinct like carving'.[22]

[15] Cf. in Legge, *Fâ-hien*, p. 26, note 2, the striking description of the Indus defiles about Rongdo quoted from Cunningham, *Ladak*, pp. 88 sq.

[16] This fact disposes of Legge's misgivings about the identity of *T'o-li* and Darēl, as expressed p. 24, note 2, of his translation.

[17] See Legge, *Fâ-hien*, p. 28.

[18] Legge, *Fâ-hien*, p. 29.

[19] See Watters, *Yuan Chwang*, i. p. 231; Julien, *Mémoires*, i. p. 135.

[20] See Deane, *Note on Udyāna*, *J.R.A.S.*, 1896, p. 656.

[21] See *Anzeiger* of the Imperial Academy of Sciences, Vienna, 1898, iv. pp. 12 sqq. The two impressions of the same stone which I communicated on Colonel Deane's behalf, were taken by Professor Bühler to be those of two separate inscriptions, a misapprehension which that great scholar's sudden death very soon after the publication prevented from being promptly cleared up.

[22] See Legge, *Fâ-hien*, p. 29; Watters, *Yuan Chwang*, p. 231. It is possible that the rock-carving, evidently natural, to which the pilgrims allude, still exists; for among the paper estampages which had been brought to Colonel Deane

Fa-hsien's account of *Su-ho-to*.

From Wu-ch'ang, the *Fo-kuo-chi* tells us, Fa-hsien with some of his companions 'descended south, and arrived in the country of *Su-ho-to*'. In the name of this territory, 宿呵多, a transcription of an older form of *Swāt* was long ago surmised. This is confirmed by the fact that the only sacred site mentioned here by Fa-hsien—the one where in a previous birth the Bodhisattva, in order to save a dove pursued by a hawk, was believed to have 'cut off a piece of his own flesh, and with it ransomed the dove'—is located by Hsüan-tsang in the hills to the south-west of Manglaur.[23] Guided by the exact topographical indications in Hsüan-tsang's *Memoirs*, and by the rapid archaeological survey I had effected while accompanying the Bunēr Field Force in January, 1898, I was able to identify the site indicated with the remains of a large Stūpa found near the village of Girārai in the extreme west of Bunēr, and at the foot of the range dividing it from the Swāt Valley.[24] That Bunēr was in Buddhist times reckoned as part of Udyāna is proved by the series of sacred sites which Sung Yün and Hsüan-tsang describe in the south of Udyāna, and which I traced during my survey in Bunēr.[25] Why Fa-hsien should have distinguished Bunēr by the separate designation of Su-ho-to can no longer be determined.[26]

Sung Yün's journey to Swāt.

The next and more detailed account of Udyāna is supplied by the pilgrim Sung Yün and Hui-shêng, members of the religious mission which the Empress Hu of the Western Wei dynasty dispatched to the North-West of India in A.D. 518. Their journey from Khotan to Sarīkol I have discussed elsewhere.[27] Thence they made their way in the early autumn of A.D. 519 across the Pāmīrs to Wakhān, and the seats of the Yeh-tas or Hephthalites in the present Badakhshān.[28] After a brief stay there, as Sung Yün's narrative and Hui-shêng's notes preserved in the Wei Annals tell us, the pilgrims passed through the small mountain tract of Po-chih into the territory of Shê-mi. There they gradually emerged from the Ts'ung-ling Mountains, and hence gained Udyāna which lay to the south of Shê-mi.[29] In my *Ancient Khotan* I have already had occasion to show that the territory of Shê-mi, which a passage of the T'ang Annals describes as bordering Chieh-shih or Chitrāl on the west and south, corresponds to 'the cluster of valleys to the south of the great snowy range [of the Hindukush] which since mediaeval times has been known by the general name of Kāfiristān'.[30] There I also indicated my belief that the route followed by Sung Yün and his companions led them through one of the easternmost valleys of Kāfiristān down to the Kūnar River and thence across Dīr (or Bājaur̤) into the Swāt Valley. But additional information since obtained about that region, as well as other reasons, make it desirable to trace the pilgrims' route here in fuller detail.

Sung Yün's passage through Po-ssŭ.

From Sung Yün's narrative we learn that after leaving the Hephthalite king's encampment, which at the season indicated (tenth Chinese month, i.e. about November, A.D. 519) is likely to

by his native agents, and which he handed over to me early in 1898, there was one which showed a rock surface curiously cut up by natural cross lines, recalling the threads of some woven fabric. There were traces of some Kharoṣṭhī characters also. Some place in the Upper Swāt Valley was vaguely indicated as the provenance. The publication of the estampage was prevented by the death of Professor Bühler for whom it was reserved, and subsequently by the doubts which (justly enough) arose about the genuineness of the many 'inscriptions in unknown characters' supplied to Colonel Deane by the less scrupulous of his agents.

[23] See Legge, *Fâ-hien*, pp. 30 sq.; Watters, *Yuan Chwang*, i. p. 234; Julien, *Memoires*, i. p. 137.

[24] See my *Archaeological tour with the Bunēr Field Force*, pp. 16, 61–2, and below, p. 16 with note. (Also *Indian Antiquary*, 1899, pp. 21, 60.)

[25] For references see below, p. 16.

[26] It is noteworthy that as far as Su-ho-to Fa-hsien's narrative shows none of those errors in bearings and distances which from the next territory, Gandhāra, onwards often perplex the student of ancient Indian geography.

[27] See *Ancient Khotan*, i. pp. 28 sqq.

[28] For this portion of the pilgrims' route cf. below, pp. 60 sqq.

[29] See Chavannes, *Voyage de Song Yun*, pp. 27 sqq.

[30] See *Ancient Khotan*, pp. 14 sq.; for the hill state of *Chieh-shih* (also appearing with a slight graphic variation under the name of *Chieh-shuai*), cf. Chavannes, *Turcs occid.*, pp. 158 sq., 214 sq.; for its identity with Chitrāl see also below, p. 30.

have been in the neighbourhood of Faizābād or even lower down, he entered the kingdom of *Po-ssŭ* 波斯.[31] Its territory, which was very confined, was traversed in seven days. The mountaineers inhabiting it had extremely scanty resources and were of a wicked and insolent disposition, paying no respect to their king. In this territory there was a stream which had been shallow, but subsequently a landslip intercepted its course and transformed it into two lakes. A poisonous dragon lived there and produced many calamities; in the summer it brought down violent rainstorms, in the winter it heaped up the snows. Travellers on its account experienced many difficulties; the white glare of the snow dazzled their sight and made them close their eyes, so that with troubled sight they could no longer distinguish anything. So they sacrificed to the dragon-king and thereafter recovered peace.

Po-ssŭ identified with Zebak.

An extract from Hui-shêng's record given by the *Pei shih* in substance reproduces the same information about this territory, which is there called *Po-chih* 波知 and is placed to the south-west of *Po-ho* or Wakhān.[32] This location led Professor Marquart to identify Po-ssŭ or Po-chih with the mountain tract between Zebak and the Hindukush watershed towards Chitrāl,[33] and a closer examination of the route which Sung Yün and his companions must have followed proves this identification to be right. For travellers coming from Badakhshān and wishing to gain Swāt, the most direct, and probably also the easiest, route across the Hindukush leads south of Zebak up the valley of Sanglich. From the headwaters of the Zebak River thus reached, two important passes lead across the Hindukush watershed: one is the Dorāh, 14,800 ft. above the sea, which gives access to the Lutkhō Valley, descending to the Chitrāl capital, and is crossed by a much-frequented caravan route.[34] The other is the Mandal Pass, about 15,300 ft. high and about six miles in a direct line to the south-west of the Dorāh, over which a route leads down into the Bashgol Valley, the easternmost main valley of Kāfiristān. Where the tracks descending northward from the two passes join lies the Hauz-i-Dorāh or Lake Dufferin, a sheet of water nearly two miles long, and about half a mile wide, enclosed on both sides by steep slopes of rock which leave room only for a difficult path on the east. About a mile and a half lower down, the route to Zebak passes a second and much smaller lake.[35]

Sung Yün's reference to Lake Dufferin.

That these are the two lakes to which Sung Yün's legendary account of the dragon refers, may be considered certain; for the reliable information[36] I have been allowed to consult shows plainly that this feature is not found on the northern approaches of any of the other Hindukush passes, from the Khatinza to the Kamarbida, which could possibly be connected with Sung Yün's route. The conclusion that the pilgrim travelled up by way of Zebak to Lake Dufferin is confirmed also by the seven marches which he indicates for his passage of *Po-chih*; for at the present day, too, the distance from the Dorāh to Khairābād where the Warduj Valley comprising Zebak and Sanglich ends, is reckoned at seven marches.

Sung Yün's Shê-mi identified with Kāfiristān.

From Lake Dufferin two routes, as already stated, were open to the pilgrims. That they chose not the Dorāh but the Mandal Pass is evident from the details of their subsequent progress. In the second half of the eleventh month they entered the kingdom of *Shê-mi* where they gradually passed out of the Ts'ung-ling Mountains. The cultivable soil there was stony, and the people mostly wretched. On the steep paths and dangerous routes it was with difficulty that a single man

[31] See Chavannes, *Voyage de Song Yun*, pp. 27 sqq.

[32] See Chavannes, *Voyage de Song Yun*, p. 27, note 7.

[33] Cf. Marquart, *Ērān-šahr*, p. 245.

[34] It is probable that the name *Dorāh* which is locally understood to mean *do-rāh* 'two roads' (the native survey edited by Raverty, *Notes on Afghānistān*, p. 160, distinctly calls the pass *Kotal-i Do-Rāhah*), is due to the close vicinity of the two passes to which the northern approach lies by the same route as far as Lake Dufferin.

[35] Cf. *North-Western Transfrontier Sheet*, No. 26 S.E., Survey of India.

[36] Printed but not published.

and his horse had room to pass.[37] Hui-shêng's record notes besides that Shê-mi lay to the south of Po-chih, and that its inhabitants did not believe in the Buddhist religion but served divers divinities.[38] I have referred above to the passage of the T'ang Annals which describes Shê-mi as adjoining Chieh-shih or Chitrāl on the west and the south. Reference to the map shows that this description accords exactly with the relative position of Chitrāl and the Kāfir territory, which even in quite recent times reached both sides of the Kūnar Valley above and below Arnawai. It is equally evident from the map that it is the Bashgol Valley, with its numerous and large Kāfir settlements (Fig. 8), which occupies the position indicated due south of Po-chih or the Zebak-Warduj Valleys, whereas Chitrāl lies partly to the east and partly to the south-east of them. It would have been difficult among the high and barren mountain-spurs of Chitrāl for the travellers to believe themselves to be emerging from the Ts'ung-ling, whereas the description suits well the more open and fertile Kāfiristān valleys. Finally the statement about the absence of Buddhist worship would not fit Chitrāl, where surviving remains actually attest its presence about Sung Yün's time, while on the other hand, in the Kāfir valleys, the worship of 'divers divinities' has continued to our own days without a trace of Buddhism having ever existed by its side.

Route across Mandal Pass.

Though the route over the Mandal Pass has not been regularly surveyed, there is trustworthy information to show that it is practicable for laden animals in the summer and autumn, probably under conditions much like those on the neighbouring Dorāh.[39] Since the Afghān occupation of Kāfiristān a regular trade route appears, in fact, to have been opened up to the head of the Bashgol Valley and across the pass. That even before this a good deal of trade made its way thither from the Badakhshān side is evident from a remark of Sir George Robertson who ascended the Bashgol Valley in 1892.[40]

Marco Polo on Nigūdar's inroad.

To revert to an earlier period, it is noteworthy that the route in Marco Polo's account, by which the Mongol partisan leader Nigūdar, 'with a great body of horsemen, cruel unscrupulous fellows', made his way from Badakhshān 'through another province called *Pashai-Dir*, and then through another called *Ariora-Keshemur*' to India, must have led down the Bashgol Valley.[41] The name of *Pashai* clearly refers to the Kāfirs among whom this tribal designation exists to this day,[42] while the mention of Dīr indicates the direction which this remarkable inroad had taken. That its further progress must have lain through Swāt is made probable by the name which, in Marco Polo's account, precedes that of 'Keshemur' or Kashmīr; for in the hitherto unexplained *Ariora* can be recognized, I believe, the present *Agrōr*, the name of the well-known hill-tract on the Hazāra border which faces Bunēr from the left bank of the Indus.[43] It is easy to see from any

[37] See Chavannes, *Voyage de Song Yun*, p. 28.

[38] See *ibidem*, note 3.

[39] The route leading up the Bashgol Valley to this pass is described quite accurately in the 'Surveys' dating back to *circ.* 1789–90, which Raverty has edited in his *Notes on Afghānistān*, p. 149. The pass is there called Apā-luk. Raverty has called due attention to the importance of this route connecting Badakhshān with the Kābul river valley and Peshawar.

[40] See Robertson, *The Kafirs of the Hindu-kush*, p. 305. That Sir George Robertson was able to cross what he calls the Mandal Pass, at the very beginning of June, without exceptional difficulties (*loc. cit.*, pp. 312 sqq.), in spite of the snow which was then still heavy, confirms the estimate given as to the practicability of the route. It must, however, be noted that the pass by which he crossed was clearly on the side route branching off to the Munjān River headwaters and thus identical with what the map marks as Wulf Pass.

[41] See Yule, *Marco Polo*, i. p. 98, with note, p. 104; *Ancient Khotan*, i. p. 14, note 28.

[42] See references in Yule, *Marco Polo*, i. p. 165; also Grierson, *Z.D.M.G.*, lxvi. p. 70, note 1.

[43] In my note on *Rājat.* viii. 3402 I have shown that the modern form *Agrōr* is the direct phonetic derivative of the Sanskrit *Atyugrapura*, the name by which Kalhaṇa mentions this hill tract in connexion with a contemporary expedition to Uraśā or Hazāra. The intermediate Prākrit form **Ayugraura*, which the phonetic development there discussed presupposes, would help to account for Marco's *Ariora*. Cf. also the form Ἰθάγουρος in which Atyugrapura > Agrōr is presented by Ptolemy, *Geography*, VII. i. 45, as one of the 'cities' of the Ἄρσα territory, i. e. Uraśā.

accurate map of these regions, that for a mobile column of horsemen forcing its way from Badakhshān to Kashmīr, the route leading through the Bashgol Valley, Dīr, Talāsh, Swāt, Bunēr, Agrōr, and up the Jhelum Valley would form at the present day, too, the most direct and practicable line of invasion.[44]

Sung Yün's description of Indus route.

In his narrative Sung Yün mentions also an alternative route to Wu-ch'ang or Udyāna, which led through *Po-lu-le* 鉢盧勒, and describes its formidable difficulties. Iron chains there served for bridges, and suspended across the void formed a passage; below, the bottom was not visible; there was no support by the sides; in an instant the traveller's body might be precipitated to a depth of 80,000 feet. On this account Sung Yün and Hui-shêng, realizing from afar the nature of these places, refrained from taking this route.[45] The *Pei-shih's* corresponding, though briefer, account of this route, places it distinctly to the east. This fact, together with the verbal approximation of Sung Yün's *Po-lu-le* and Hsüan-tsang's *Po-lu-lo*, above Darēl,[46] makes it certain that the route is meant which led through Yasīn and Darēl down to the gorges of the Indus Valley, and which, as we saw, was followed by Fa-hsien.[47]

Sung Yün's account of Udyāna.

Sung Yün, who spent the whole winter and part of the spring of A.D. 520 in Wu-ch'ang 烏場, has left a full and enthusiastic description of the country where he found Buddhism still highly flourishing.[48] He makes its territory touch the Ts'ung-ling Mountains to the north, and India to the south. The climate was temperate, and the people and natural products abundant and strong. The local customs conformed to pious traditions of old. The king conducted himself with strict adherence to Buddhist rules, observed a vegetable diet and abstinence, and worshipped Buddha at daybreak and nightfall. The gracious reception he accorded to Sung Yün is related at length, as well as the polite desire he expressed at its end to be re-born in the 'Celestial Kingdom'.

People guilty of mortal crimes were not executed, but banished to desert mountains where they were left the care of their own maintenance.[49] In doubtful cases justice was administered by ordeal based on the use of drugs. The soil is described as fertile and excellent, and the people and products as flourishing. All kinds of cereals were grown and the different fruits ripened in abundance. During the night the sound of the temple bells filled the whole country. There was

[44] Marco Polo in Book I, Chap. xxx, estimates 'Keshimur' or Kashmīr at only seven days' journey from Pashai to the south-east, and the shortness of this estimate has perplexed even Yule; see id., *Marco Polo*, i. p. 166. But the route above indicated permits an explanation. Starting from some point like Arnawai on the Kūnar River which certainly would be well within 'Pashai', lightly equipped horsemen could by that route easily reach the border of Agrōr on the Indus within seven days. Speaking from personal knowledge of almost the whole of the ground I should be prepared to do the ride myself by the following stages: Dīr, Warai, Sado, Chakdara, Kinkargalai, Bājkatta, Kai or Darband on the Indus. It must be borne in mind that, as Yule rightly recognized, Marco Polo is merely reproducing information derived from a Mongol source and based on Nigūdar's raid; and further that Hazāra and the valley of the Jhelum were probably then still dependent on the Kashmīr kingdom, as they were certainly in Kalhaṇa's time, only a century earlier. As to the rate at which Mongols were accustomed to travel on 'Dak', cf. Yule, *Marco Polo*, i. pp. 434 sqq.

[45] See Chavannes, *Voyage de Song Yun*, pp. 28 sqq.; for the note in the *Pei-shih*, see *ibid.*, p. 28, note 3.

[46] For Hsüan-tsang's Po-lu-lo 鉢露羅, cf. *Ancient Khotan*, i. p. 6, note 5. As Hsüan-tsang places Po-lu-lo 500 li to the east of Darēl up the Indus it must strictly be identified with Baltistān. Between Sung Yün's *Po-lu-le*, which evidently represents Yasīn, and *Po-lu-lo* there is the same relation as between the 'Little *P'o-lü*' and the 'Great *P'o-lü*' of the T'ang Annals, the former representing Yasīn with Gilgit, the latter Baltistān; cf. *Ancient Khotan*, i. pp. 5 sqq.

[47] See Chavannes, *Voyage de Song Yun*, p. 28, note 7; above, p. 7.

[48] See Chavannes, *loc. cit.*, pp. 29 sqq. I extract from this translation only the essential features of the general description.

[49] Colonel Deane in *Notes on Udyāna*, *J.R.A.S.*, 1896, p. 662, has rightly called attention to the fact that outcasting is the sole punishment for murder also among the Kāfir tribes; see Robertson, *The Kafirs of the Hindu-kush*, pp. 440 sqq.

a profusion of fine flowers the bloom of which continued during winter as well as summer ; monks and laymen gathered them for offerings to Buddha.[50]

Sacred sites mentioned by Sung Yün.

As Udyāna along with Gandhāra was the chief goal of the pilgrims' pious mission most of its sacred sites of importance find mention in their itinerary. But though there is often much detailed description, exact topographical indications are rare. There is, moreover, a certain confusion in the sequence of the extracts from the narratives of Sung Yün and Hui-shêng which the extant compilation has preserved.[51] The result is that the correct location of the sacred spots mentioned becomes possible only in the light of Hsüan-tsang's more systematic and precise account. I shall restrict myself therefore to a brief indication of those sites which, I think, can at present safely be fixed.

After leaving 'the city', which must be identified with Hsüan-tsang's Mêng-chieh-li or Manglaur, the pilgrims lead us, like Fa-hsien, to the spot where Buddha's clothes in drying had left their traces on a rock, and to the stone showing the miraculous impress of his feet.[52] The former site is placed to the east of the river, the latter eighty (or according to another reading eighteen) li to the north of the royal city, which is considerably less than the distance indicated by Hsüan-tsang and confirmed by the rock inscription of Tīrath. Between the two sites reference is made to a lake, west of the river, worshipped as the habitation of a miracle-working Nāga king. In this may be recognized the famous Nāga Apalāla, a kind of tutelary divinity of Udyāna, whose legend Hsüan-tsang relates at length in connexion with the source of the Swāt River.[53] The great temple, *T'o-lo*, which the pilgrims describe as of great magnificence and as a special object of royal attention, is placed to the north of the city and may perhaps be looked for among the extensive ruins said to exist about Manglaur.[54]

Sacred sites identified in Bunēr.

Turning to the south of the royal city the itinerary describes the sacred site where Buddha in a previous birth was believed to have used his skin for paper, and one of his bones for a pen, to write the Holy Law. This site, which Sung Yün places at a hundred li to the south of Manglaur, is mentioned also by Hsüan-tsang under the name of *Masūra-saṅghārāma*, 'the convent of the lentils'.[55] Its remains I have identified with the Gumbatai ruins near Tursak, the chief place of Bunēr.[56] Finally, there is an enthusiastic account of the sacred spot in the hills, eight marches to the south-east of the city, where Buddha in a former life sacrificed his body to feed a famished tigress. This famous site, which Hsüan-tsang visited on his return from Takṣaśilā on the east of the Indus, and which Fa-hsien mentions among the 'Four great Stūpas',[57] has been identified by me with the ruins discovered on Mount Banj, near the end of the rugged spur which descends from Mahāban south-eastwards to the Indus.[58] The fact that this famous sanctuary occupied an isolated position to the south of the watershed, which separates the ancient Udyāna (including Bunēr) from Gandhāra, may explain why both Hsüan-tsang and Fa-hsien mention it not in connexion with Udyāna, but with the territory of Takṣaśilā which faces it across the Indus.

[50] Those who have enjoyed in Lower Swāt the delightful abundance of narcissus and other early flowers in mid-winter can easily realize the personal touch imparted here to the pilgrim's description. Even the present Pathān dwellers of the valley, so little prone to sentiment, are then seen decked with bunches of flowers.

[51] Cf. on this important point M. Foucher's judicious remarks, *Géographie ancienne du Gandhâra*, p. 28, note 1: Chavannes, *Voyage de Song Yun*, pp. 5 sq.

[52] See Chavannes, *Voyage de Song Yun*, pp. 31 sq.; cf. above, p. 8.

[53] See Julien, *Mémoires*, i. p. 133; Watters, *Yuan Chwang*, i. p. 229.

[54] Cf. Deane, *Notes on Udyāna*, *J.R.A.S.*, 1896, p. 656.

[55] See Chavannes, *Voyage de Song Yun*, p. 34; Julien, *Mémoires*, i. pp. 136 sq.; Watters, *Yuan Chwang*, i. p. 233.

[56] See Stein, *Archaeological tour with the Bunēr Field Force*, p. 61, and below, p. 16.

[57] See Chavannes, *Voyage de Song Yun*, p. 33, with note 3; Julien, *Mémoires*, i. pp. 164 sqq.; Watters, *Yuan Chwang*, i. pp. 253 sqq.; Legge, *Fâ-hien*, p. 32.

[58] The remains of Mount Banj and the reasons which determine my identification, have been fully discussed in my *Archaeological Survey Report*, *N. W. Frontier*, 1904–5, pp. 33–45.

Section III.—UDYĀNA IN CHINESE RECORDS OF T'ANG TIMES

Hsüan-tsang's visit to Udyāna.

The expansion of Chinese political influence westwards which soon followed the accession of the T'ang dynasty early in the seventh century, is marked also by a considerable increase in the information which Chinese records have preserved about the 'Western Regions' and India. In the case of Udyāna, the advantage derived from this is mainly through the detailed account which Hsüan-tsang, the great 'monk of the T'ang period', has left of his visit to this territory about the year A.D. 630. Here, as elsewhere, in the vast area covered by his travels, there is reason to regret that the pious pilgrim's attention was so closely riveted upon matters of sacred tradition and doctrine to the exclusion of more worldly interests. Thus, for example, he fails to mention whether the kingdom of Wu-chang-na 烏杖那 was then one of the twelve dependent territories of the ruler of Chia-pi-shih or Kābul, or had a king of its own as a notice of the T'ang Annals seems to prove for A.D. 642.[1] As in Gandhāra, Hsüan-tsang found Buddhism here fallen low from its once flourishing condition described by the earlier pilgrims. Yet the traditional fame of the region was still great enough to induce him to give a general description of the country and people which presents distinct points of interest.

Description of Udyāna in *Hsi-yü-chi*.

Hsüan-tsang started for Udyāna northward from the city of Udabhāṇḍa or Und on the Indus and reached it after six marches across mountains and valleys.[2] He describes it as being more than 5,000 li in circumference, and comprising mountains and valleys, marshy plains and elevated plateaus, a description which correctly reflects the varied configuration of Swāt ground. The products of the soil, though varied, were not plentiful. There was abundance of grapes, but only little sugar-cane. The country produced gold, iron, and saffron;[3] there was a vigorous growth of forest, and flowers and fruit-trees flourished. Cold and heat were moderate, with wind and rain at regular seasons. The people were of a soft and pusillanimous character, and by nature inclined to craft and deceit. They were fond of study, but did not pursue it with ardour. The science of magical formulae had become with them an art and a profession. They were chiefly dressed in white calico. Their spoken language, in spite of some differences, bore much resemblance to that of India. The same applied to their written characters and their manners.[4]

The people of Udyāna.

The description of the physical conditions here given is in close accord with the actual aspects of the country. What is said of the character of the people can be explained partly by the debilitating influence which extensive rice cultivation, as practised in Lower Swāt, is known to exercise upon Eastern races; an influence which the present Pathān settlers, too, relatively recent immigrants as they are, are believed to be undergoing. The reputation which Udyāna enjoyed as a home of magic is reflected in the legend which Sung Yün heard in Sarīkol of a king who, in order to overcome a wicked dragon of that region, proceeded to Udyāna, and after having there studied the magical incantations of the Brahmans for four years, returned and successfully exorcized the Nāga.[5] This practice of magical rites must have been closely bound up with the special prevalence of the Mahāyāna form of Buddhism in these parts. Hence Sir Henry Yule's just observation: 'The doctrines of Sakya, as they prevailed in Udyāna in old times, were probably strongly tinged

[1] See below. The way in which both the *Hsi-yü-chi* and the *Life* refer to Ta-li-lo as the former seat of the king of Udyāna seems to suggest that there was a local dynasty which had conquered Udyāna from that side.

[2] Cf. Julien, *Mémoires*, i. pp. 131 sqq.; Watters, *Yuan Chwang*, i. pp. 225 sqq.

[3] Gold is washed, though only in very modest quantities, from the sands of the Swāt River; iron is mentioned in Swāt by Abū-l-Fazl (see Raverty, *Notes on Afghānistān*, p. 166) and is still smelted from gravel on the Panjkōra headwaters; see *Geograph. Journal*, xl. p. 53.

[4] Thus Julien; Watters, *loc. cit.*, translates: 'The rules of their written language were in a rather unsettled state.'

[5] See Chavannes, *Voyage de Song Yun*, p. 21.

with Sivaitic magic, and the Tibetans still regard that locality as the classic ground of sorcery and witchcraft.'[6]

Buddhism in Udyāna.

Hsüang-tsang then proceeds to give information which plainly shows that Buddhism, though still the predominant form of worship, was in a state of far-advanced decay. The people valued the law of Buddha, and believed reverentially in the Mahāyāna doctrine. Along the two banks of the *Su-p'o-su-tu* or Swāt River,[7] there had once existed 1,400 monasteries, but most of them were now in ruins. Once they had contained 18,000 brethren, but now their number was greatly diminished. All these monks studied the Mahāyāna, and specially devoted themselves to the practice of meditation. They were fond of reading their texts, but were incapable of penetrating their meaning. They conducted themselves according to their rules, and specially cultivated the science of magical formulas. The pilgrim then enumerates the five redactions of the Vinaya taught, curiously enough all belonging to the 'Little Vehicle', and adds that there were also about ten Deva temples, in which lived a medley of various sectarians, a distinct reference to Hindu worship.

Topographia sacra of Udyāna.

According to him, Udyāna contained four or five strong cities, and most of its rulers had taken for their capital the town of *Mêng-chieh-li* 瞢揭釐, which was sixteen or seventeen li in circuit, and supported a flourishing population. The identification of Mêng-chieh-li with the present Manglaur, first apparently proposed by V. de Saint-Martin, is strongly supported by what is known of the natural advantages of the site and the extensive ruins about it.[8] Hsüan-tsang uses the town as the starting-point for the topographical indications he furnishes as regards the various sacred localities detailed in his *Memoirs*, and the relative ease with which it has been possible to trace these within the area so far accessible for an archaeological survey helps to give confidence in that identification. Unfortunately the only opportunity which has so far brought Europeans to Manglaur and its neighbourhood was the rapid punitive expedition to Upper Swāt in the course of the great tribal rising of 1897, and this could not be utilized for archaeological work. In consequence the various Stūpas which Hsüan-tsang's *Memoirs* specify at short distances to the south-west, west, and north-east of Mêng-chieh-li, cannot be identified at present with any certainty.[9] It seems, however, probable that the Stūpa which Uttarasena, an early king of Udyāna, was believed to have erected over relics of Buddha's body, is marked by the great ruined dome near Barīkōt on the left bank of the Swāt River, as the distance and bearing agree closely with the sixty to seventy li to the south-west of the capital which the pilgrim mentions.[10]

The ground for identification is safer, even though the distance from the surveyed area be greater, as regards the spring of the Nāga Apalāla already discussed above, in which a legend related at length by the pilgrim placed the source of the Swāt River.[11] With this once located it

[6] Cf. Yule, *Marco Polo*, i. pp. 164 sq.

[7] This form of the river name, as found in the old text A of the *Hsi-yü-chi* (cf. Watters, *Yuan Chwang*, i. p. 226), is distinctly preferable to the form *Su-p'o (p'an?)-fa-su-tu* found in other texts, as it represents a correct phonetic transcription of *Suvāstu*, the original Skr. form of the name. Cf. Marquart, *Zur Geschichte von Eran*, ii. p. 248, who justly protests against Lassen's reconstruction of a Skr. **Śubhavastu* out of the reading *Su-p'o-fa-su-tu* which, if correct at all, probably is due to the influence of a learned etymology.

[8] Cf. Deane, *Notes on Udyāna*, *J.R.A.S.*, 1896, pp. 655 sqq.; V. de Saint-Martin, in Julien, *Mémoires*, ii. pp. 314 sq.

[9] For conjectures regarding the sacred sites thus mentioned by Hsüang-tsang (see Julien, *Mémoires*, i. pp. 133, 139 sq.; Watters, *Yuan Chwang*, i. pp. 227, 236 sqq.), cf. Deane, *J.R.A.S.*, 1896, pp. 659 sq.

[10] For a photograph of the Barīkōt Stūpa, which is just visible from the Landakē ridge, the eastern limit of Lower Swāt, see Foucher, *L'art du Gandhāra*, i. p. 67.

[11] See above, p. 8; Deane, *J.R.A.S.*, 1896, p. 656. Watters, *Yuan Chwang*, i. pp. 229 sq., rectifies several obvious mistakes in Julien's translation of the passage describing the origin of the Swāt River. The wicked Nāga before his conversion used to destroy the crops of the country by the 'white water', i.e. the floods he sent down from his spring. After his submission he was allowed for his maintenance to carry off the crops only once in every twelve

is possible to fix with fair accuracy the position of the sacred spots further down by the river, where Buddha's miraculous footprints and the impress left by his drying clothes received pious worship.[12]

Hsüan-tsang's account of Bunēr sites.

Also when Hsüan-tsang passes on southwards, identifications of the sacred sites he describes become possible owing to the rapid archaeological survey I was able to effect in 1898, while with the Bunēr Field Force. Thus I have shown that the *Mahāvana* convent, two hundred li to the south of the Swāt capital, where Buddha in a former birth had delivered himself up to a king, his enemy, in order that the reward offered for his person might benefit a poor Brahman, is still marked by the ruins of Pinj-kōṭai near Sunigrām in Bunēr.[13] With this point determined and guided by the *Hsi-yü-chi's* precise bearings and distances, it became possible for me also to trace the remains of the Masūra-saṅghārāma or 'Convent of the lentils', and of the Stūpa which marked the spot where Buddha in a previous existence had ransomed the dove, at Gumbatai near Tursak and at Girārai respectively.[14] Both sites have already been referred to, the first being mentioned also by Sung Yün and the second by Fa-hsien.[15] To this group of Bunēr sites a fourth may be added, if the tempting identification proposed by M. Foucher of the *Hi-lo* mountain with Mount Ilam, the most conspicuous peak in the range separating the Swāt Valley from Bunēr, is accepted.[16] The description which Hsüan-tsang gives of the mountain, the bearing to the south of Manglaur which he indicates, and the name itself would well agree with the suggested location. But there remains the fact that the versions so far known of the *Hsi-yü-chi's* text put the distance at *four* hundred li, while M. Foucher must conjecturally emend it to *one* hundred. So a decision must be left until the time when it will be possible to pay a visit to Mount Ilam and to verify the presence, or otherwise, of the square stones mentioned by the pilgrim, 'resembling couches and looking as if made by the hand of man, which touch each other and continue from the sides of the mountain down into the valley'. The superstitious respect in which the peak is held to-day might well be a reflex of the legends to which Hsüan-tsang alludes, about mysterious voices and musical strains heard on the mountain where Buddha 'once gave up his life for the hearing of a half-stanza of doctrine'.[17]

Buddhist sites in Adīnzai Valley.

From the Stūpa, marking the spot where Buddha had redeemed the pigeon, a journey of two hundred li north-westwards brought the pilgrim to a group of sacred sites in a valley which he calls *Shan-ni-lo-shih*.[18] The distance and bearing taken from Girārai justify Colonel Deane in his identification of this with the Adīnzai Valley which debouches at Chakdara from the north.[19] Remains of Buddhist shrines can be traced at several points along the lower part of this valley,

years. 'And so once every twelve years the countryhas the "white water" infliction.

M. Foucher has rightly pointed out that the folklore notion underlying the legend of Apalāla is the same as in the Kashmīr legend of the Nāga Suśravas; see his article on *Les bas-reliefs du Stūpa de Sikri*, *J.A.*, 1903, ii. p. 185; also my note on *Rājat.* i. 263–5. M. Foucher has also justly called attention to the identity of the expression 'white water' with the Turkī term *ak-su* applied in Chinese Turkestān to the summer floods from the mountains; cf. *Ruins of Khotan*, i. pp. 185, 426; *Ancient Khotan*, i. pp. 94, 445. It is curious that Albērūnī (ii. p. 182, as quoted by Watters) records a tradition from Swāt about the water of a certain valley becoming white on certain days of the year. The Nāga Suśravas, too, is supposed after his banishment to reside in a 'lake of dazzling whiteness resembling a sea of milk which he created for himself on a far-off mountain'; see my *Rājat.* i. 267, with note.

[12] Cf. above, p. 8.

[13] See *Archaeological tour with the Bunēr Field Force*, pp. 34 sqq., 61–2 (also *Ind. Ant.*, xxviii. pp. 14, 58).

[14] Cf. *ibidem*, pp. 16 sqq., 61–2 (*Ind. Ant.*, xxviii. pp. 21, 25, 59 sq.). It may be noted that the designation *Masūra* is not certain since the text of the *Hsi-yü-chi* shows *Mo-yü* 摩愉 for the form *Mo-shu* 摩輸 presupposed by an explanatory gloss. Sung Yün's text shows the second character as 休 *hsiu*.

[15] See above, pp. 9, 13.

[16] Cf. Foucher, *Géographie ancienne du Gandhâra*, p. 48, note 3.

[17] Cf. Watters, *Yuan Chwang*, i. p. 231; Julien, *Mémoires*, i. pp. 135 sq.

[18] See Julien, *Mémoires*, i. pp. 137 sq.; Watters, *Yuan Chwang*, i. pp. 235 sq.

[19] See Deane, *Notes on Udyāna*, *J.R.A.S.*, 1896, p. 657.

and this makes it at present more difficult to determine where the convent of the 'Serpent medicine' and the neighbouring great Stūpa of *Su-mo* are to be exactly located. They were both believed to have been erected at places where Buddha in a previous birth as Indra had changed himself into a serpent and allowed pieces of his body to be eaten in order that the people suffering from famine and pestilence might be cured. The much-decayed mounds of *Sapar* and *Andān-ḍhērī*, in which Colonel Deane had thought to recognize remains of these structures, lie close to the point where the route to Bājauṛ, and with it the present military road to Chitrāl, turns sharply west towards the Kātgala Pass. I had paid them a visit at the close of 1896, and ascertained then that the supposed name of *Sūma* was not known locally. For excavation, which alone could help definitely to settle the question as to the identity of the remains, there was no time on my rapid passage of 1906.

To the north of the valley, and by the side of a steep cliff, the *Hsi-yü-chi* mentions a Stūpa near a healing spring which Buddha, in a previous birth as a king of peacocks, was believed to have pecked open with his beak. Colonel Deane has suggested the location of this site at the village Guḍai-khwar, high up on the steep slope of the Laram Mountain, and some ten miles to the north of Chakdara, where an abundant spring was reopened in recent times under rather remarkable circumstances. The visit I paid to this spot at the end of 1897 makes me inclined to accept this identification as probable, even though I failed to find remains of a Stūpa above ground, or the traces of the peacock's feet which pious Buddhists' eyes used to see on the rock.[20]

Hsüan-tsang's 'dragon lake'.

The only sacred locality in Hsüan-tsang's narrative still calling for mention is the 'dragon lake' on the mountain called *Lan-po-lo*. A legend related at great length connected it with an exiled Śākya who married the dragon or Nāga's daughter, and became the founder of the royal house of Udyāna. The direction indicated, a hundred and forty or a hundred and fifty li to the north-west of a sanctuary which itself must be looked for within a distance of four or five miles north of Manglaur, makes it appear probable that the lake of Saidgai is meant, which information collected by Colonel Deane places at the head of the Aushiri Valley draining into the Panjkōra from the north-east near Darōra.[21] This mountain tract between the Upper Swāt River and the Panjkōra still remains unsurveyed, and I am hence unable to add details to the arguments adduced by Colonel Deane for his very tempting identification.

Wu-k'ung's journey to Udyāna.

The only other Chinese pilgrim whose visit to Udyāna is detailed in the records so far made accessible, is Wu-k'ung. The travels of this humble successor of Hsüan-tsang (A.D. 751–790) fall into a period when Chinese influence in the 'Western Regions' was rapidly waning, and he must have been one of the last pious travellers to make his way to the Indian North-West through Central Asia. Though he appears to have spent a very considerable portion of his long Indian residence in Gandhāra and the neighbouring Udyāna, his notices here as elsewhere are meagre. But his record of the route by which he travelled from Kāshgar to Udyāna, brief as it is, presents points of interest.[22] He was attached to a Chinese envoy, dispatched to the ruler of Chi-pin (i.e. the Kābul Valley and Gandhāra) in response to a mission thence which had reached the Imperial court in A.D. 750, and he travelled thus across the Ts'ung-ling Mountains, or the Pāmīrs, to the territory of the 'Five Ch'ih-ni or Shih-ni'. This corresponds, as a passage of the T'ang Annals quoted by M. Chavannes proves, to the present Shighnān on the Oxus.[23] Hence the party proceeded through

[20] See Deane, *loc. cit.*, pp. 658 sq. The large stone bowl with which the mouth of the spring is there stated to have been closed before its rediscovery, and which now serves for a flower bed in the garden of Government House, Lahore, certainly belonged to some Buddhist Stūpa; cf. Foucher, *L'Art du Gandhâra*, p. 186, note 2.

[21] Cf. Deane, *loc. cit.*, *J.R.A.S.*, 1896, p. 661. The lake is said to be more than a mile in length. The popular belief in 'Jins' constantly seen on the banks of the lake points plainly to the survival of the old local tradition.

[22] See Chavannes and Lévi, *Itinéraire 'Ou-k'ong*, *J. as.*, 1895, pp. 9 sqq. (reprint).

[23] Cf. *ibidem*, p. 10, note 3; Chavannes, *Turcs occid.*, p. 162, note 4.

Hu-mi or Wakhān to the kingdom of Chü-wei in which, as has been shown elsewhere, we must recognize Mastūj.[24] The route so far indicated, devious as it may seem, corresponds exactly to the one taken by the remarkable expedition which the Chinese general Kao Hsien-chih in A. D. 747 led from Kāshgar to the successful invasion of Yasīn, and which there will be occasion later to consider in detail.[25] Hence it is *a priori* probable that Wu-k'ung's party, for its progress to Mastūj, used the Barōghil saddle which offers far the easiest passage from Wakhān across the Hindukush, and which only a few years earlier had seen the triumphant advance of Kao Hsien-chih's force.

Wu-k'ung's route through Mastūj and Yasīn.

From the Barōghil, at the head of the Yārkhun River, the routes of Kao Hsien-chih and Wu-k'ung diverged. Whereas the former led his troops straight across the high Darkōt Pass into the Yasīn Valley, Wu-k'ung's party evidently descended the Yārkhun for some distance before gaining Yasīn territory, and thence Udyāna; thus only is it possible to account for the itinerary which Wu-k'ung's biography indicates. After Chü-wei there follow in it 'the kingdom of Ho-lan, then the kingdom of Lan-so, then the kingdom of Yeh-ho, then the kingdom of Wu-chang-na (also called Wu-ch'ang or Wu-ch'an)'. Now as regards *Yeh-ho* 孽和 M. Chavannes was undoubtedly right in recognizing in it a variant of the name *Yeh-to* 孽多, by which the notice of the T'ang Annals designates the capital of Little P'o-lü or Yasīn.[26]

To understand the interposition of the two territories which precede Yeh-ho in Wu-k'ung's list is not difficult, if the actual topography of this mountain region is consulted. After a descent of the Yārkhun river to Chü-wei, i. e. to the cultivated part of the valley extending above Mastūj proper, the easiest route towards Yasīn lies from Mastūj up the Lāspur Valley, and thence across the low Shandur Pass eastwards into the valley of Ghizar, which is joined by that of Yasīn from the north at Gūpis.[27] It is this route, still the main line of communication between the Yārkhun Valley and the drainage area of the Gilgit-Yasīn River, that Wu-k'ung and his companions may safely be assumed to have followed. After leaving the chief place of Chü-wei which the notice of the T'ang Annals calls 'the town of A-shê-yü-shih-to', and which I have been able to identify with the present village group of Shuyist, Wu-k'ung must have passed down to Mastūj, to-day the administrative centre of the upper Yārkhun Valley, and thence through Lāspur. It is evidently this narrow but fertile valley which Wu-k'ung means by the territory of *Lan-so* 藍娑, for the characters are such as would ordinarily be used for the abbreviated transcription of a local name like **Lasapura*.[28] I am unable at present to suggest an equally convincing identification for *Ho-lan* 葛藍; but I have no doubt that it must represent an older name of either Mastūj itself, or of one of the more important village tracts higher up the Yārkhun like those of Brep or Mīragrām.

Political conditions during Wu-k'ung's journey.

It is, of course, impossible to determine with absolute certainty the reason which induced Wu-k'ung's party to choose the route indicated instead of the far more direct one across the Darkōt Pass which, as already seen, Fa-hsien must have followed on his descent from the Pāmīrs to Darēl and Udyāna.[29] The same applies to the question, why, having followed the Yārkhun River, they did

[24] See *Ancient Khotan*, i. p. 15, note 31, and below, pp. 42 sq.

[25] See *Ancient Khotan*, i. pp. 8 sqq.; below, pp. 52 sqq.

[26] Cf. Chavannes, *Turcs occid.*, pp. 129, note 2; 150 (where *Sie-to* is a mistake for *Ye-to*); *Ancient Khotan*, p. 16, note 31.

[27] The only alternative route leads across the high Tui Pass, 14,700, with a difficult piece of glacier to be crossed, and is practicable only for some months in the summer; cf. Biddulph, *Hindoo Koosh*, p. 56.

[28] If we substitute with M. Chavannes the character *po* 婆 by correction for the *so* 娑 of Wu-k'ung's biography it is equally easy to recognize a form of the name of *Lāspur* in the transcript. The suggested identification, however, of this **Lan-po* with Lampāka or Lamghān is one which M. Chavannes no longer now maintains, since adopting the identification of Chü-wei with Mastūj he rightly makes Wu-k'ung proceed down the Yārkhun Valley and across the Shandur Pass to Yasīn; see Chavannes, *Notes Addit.*, p. 43, note 4.

[29] See above, p. 7.

not continue their journey down to Chitrāl, and thence by way of Dīr to Swāt. Fortunately, however, Chinese historical records furnish a good deal of precise information for these years about the political influence which Chinese power in the Tārīm Basin, under the T'ang dynasty, exercised in these remote valleys south of the Hindukush before its final collapse. And this information throws light on local conditions, which are likely to have had their bearing upon the route followed by Wu-k'ung's party.

It is known from a series of interesting notices which M. Chavannes first extracted from Chinese diplomatic and historical records, and which I have discussed elsewhere at some length,[30] that the efforts made by the Chinese Government about the middle of the eighth century to prevent their old enemies, the Tibetans, from expanding their power westwards along the Hindukush, and joining hands with the Arabs on the Oxus, were not confined to Yasīn and Gilgit. Within two years of Kao Hsien-chih's successful relief of 'Little P'o-lü', i. e. Yasīn and Gilgit, from Tibetan invasion, this territory was threatened by an alliance between the Tibetans and the chief of Chieh-shuai (or Chieh-shih), the identity of which with Chitrāl I have, I believe, proved.[31] In A. D. 750 Kao Hsien-chih succeeded in defeating the Chitrāl ruler with the help of the prince of Tokhāristān, and replacing the rebel by his brother. But in the following year the Chinese under Kao Hsien-chih suffered a crushing defeat by the Arabs north of Farghāna.[32]

Wu-k'ung's probable route.

The subsequent decline of the Imperial power in the regions adjoining the Tārīm Basin was so rapid that the small Chinese garrison in 'Little P'o-lü', already reported to be in a precarious position owing to its dependence for supplies on Kashmīr, is not likely to have maintained effective control much longer. Whether it still held out or not at the time of Wu-k'ung's passage, A. D. 751 or 752, it is clear that the complete loss of prestige following Kao Hsien-chih's disaster must have exposed the Chinese mission, to which Wu-k'ung was attached, to increased risks from the Tibetans and their allies westwards. It is with these disturbed political conditions that the devious route adopted by the Chinese travellers may reasonably be connected. A move down the Gilgit river would undoubtedly have brought them closer to the danger of being intercepted by the Tibetans. It deserves consideration, therefore, whether by *Yeh-ho* may not be meant merely the uppermost portion of the Ghizar Valley which, while politically always dependent on Yasīn, was yet much safer from Tibetan attack than Yasīn proper. It should be here noted that from Ghizar village a good route is said to lead by a side valley due south to the headwaters of the Swāt River.[33]

Wu-k'ung's notices of Udyāna.

It is a pity that Wu-k'ung's notices of Udyāna, in spite of his long stay, are so brief. After reaching 'Wu-chang-na' he passed on to 'the kingdom of Mang-o-p'o and the town of Kao-t'ou, then the kingdom of Mo-tan, then the town of Sin-tu on the river Sin-tu or Indus'. Finally, in the spring of A. D. 753, the Chinese mission arrived at the kingdom of Ch'ien-t'o-lo or Gandhāra, and reached their goal in the eastern capital of Chi-pin.[34] By this it is clear that the cold-weather residence of the Turkish Śāhis of Kābul, corresponding to the present Und (Skr. Udabhāṇḍa), is meant. The very flattering reception accorded to it by the ruler of Chi-pin was no doubt due to the hope still entertained of effective help against the threatening Arabs. Of the stages mentioned before 'the town of Sin-tu', I can identify none except *Mang-o-p'o* 茫 誐 勃, which in all probability represents Manglaur (Skr. Maṅgalapura). Wu-k'ung, who was ill, remained behind in Gandhāra after the return of the mission, and, having become a Buddhist monk, from A. D. 759 onwards made extensive pilgrimages from Kashmīr to Bihār. After his return to Udyāna, which cannot have

[30] For a systematic treatment of the extracts given by M. Chavannes in his *Turcs occid.*, cf. *Ancient Khotan*, pp. 8 sqq.

[31] See *Ancient Khotan*, i. pp. 13 sqq.

[32] Cf. for these events Chavannes, *Turcs occid.*, pp. 214 sqq., 297 sqq.

[33] See Biddulph, *Hindoo Koosh*, p. 58.

[34] See *Itinéraire d'Ou-k'ong*, p. 13.

taken place before A.D. 768, but may fall much later, he resided, apparently for some time, at the monastery of Mang-o-p'o. Yet all he then tells us of the country is that it contained also monasteries of Su-ho-pa-t'i (Sukhāvatī) and Po-mang-pa-t'i (Padmāvatī). Otherwise, he is content to observe that 'during these peregrinations he visited all the holy vestiges; there is not the slightest difference between what he saw and that which the Hsi-yü-chi says'.[35] His return journey to China, which was effected between the years A.D. 783-90, and apparently by the route of the Kābul Valley and Badakhshān, will have to be touched upon elsewhere.

Udyāna in the Chinese Annals.

Apart from the accounts of pious pilgrims the Chinese records of Udyāna are confined to brief notices in the Annals of the Northern Wei and T'ang dynasties. What these tell us of the country and its people is drawn mainly from the itineraries already discussed. But some details added about the political relations with distant China are of interest.

The general description given by the notice of the T'ang Annals, of which M. Chavannes has published a translation,[36] is based upon the *Hsi-yü-chi.* It estimates the circumference of the kingdom, which is called here *Wu-ch'a* 烏荼 or *Wu-ch'ang* 烏長, at five thousand li. On the east, P'o-lü is stated to be six hundred li distant. This measurement seems to be derived from that given by Hsüan-tsang between Po-lu-lo, i.e. P'o-lü, and the valley of Ta-li-lo or Darēl;[37] the latter the T'ang notice subsequently mentions as situated in the north-east of the kingdom, and as 'the ancient territory of Wu-ch'ang'. On the west, four hundred li are allowed for the distance to Chi-pin, by which may be understood, perhaps, Puruṣapura or Peshawar, the capital of Gandhāra, then united under one rule with the Kābul Valley. 'The mountains and valleys form a continuous succession. The soil produces gold, iron, grapes, saffron; the rice ripens once a year. The inhabitants are weak and crafty; in magic arts they excel. In this kingdom capital punishment does not exist; those who deserve death are exiled into the depth of the mountains; if the guilt is doubtful the accused is made to drink a drug, and on his urine being examined to see whether it is clear or troubled he is punished accordingly.[38] The country contains five towns; the king resides in the town of *Shu-mêng-yeh-li*, also called *Mêng-chieh-li.* In the north-east is the valley of *Ta-li-lo*, which is the ancient territory of Wu-ch'ang.'

Relations between Udyāna and Gandhāra.

The mention made in A.D. 642 of an embassy which Ta-mo-yin-t'o-ho-ssŭ, king of Udyāna, dispatched to the Imperial court to offer perfume of camphor, is of interest as the reference made by the Annals to a royal present in the same year from Chi-pin shows that Udyāna and Kapiśa-Gandhāra were then not united under a single rule.[39] This certainly was the case a century later, as an imperial decree, quoted by the Annals, granted to Po-fu-chun, king of Chi-pin, the right to inherit the titles of 'King of Chi-pin and Wu-ch'ang'.[40] That the Chinese court had practical political reasons for fostering these relations with distant Udyāna is proved by interesting passages in the *T'ang-shu* and the *Tzŭ-chih-t'ung-chien.* These jointly show that in A.D. 720 the Emperor Hsüan-tsung sent ambassadors to confer the title of king on the ruler of Wu-ch'ang, as well as on those of Ku-t'u (Khotl), and of Chü-wei or Mastūj, as a reward for their refusal of the advances of the Arabs who had repeatedly tried to win them over. The Arabs are here mentioned as touching the eastern borders of Wu-ch'ang, a statement which reflects the impression conveyed by their successful raids from Sind far up the Indus during the first decades of the eighth century.[41]

[35] See *Itinéraire d'Ou-k'ong*, p. 22 sq.

[36] See *Turcs occid.*, pp. 128 sq.

[37] See above, p. 12 and note 46; Julien, *Mémoires*, i. p. 150.

[38] Cf. above, p. 12, for the exactly corresponding statement of Sung Yün from whose account these remarks are, perhaps, borrowed.

[39] Cf. Chavannes, *Turcs occid.*, pp. 129, 131.

[40] Cf. *ibidem*, p. 132.

[41] Consideration of these early and well-authenticated Arab inroads into the Punjab and up to Gandhāra (cf. Marquart, *Ērān-šahr*, p. 271; Reinaud, *Mémoire sur l'Inde*, pp. 195 sq.) obviates the necessity for the correction of the text proposed in *Turcs occid.*, p. 129, note 1.

Section IV.—THROUGH TĀLĀSH AND DĪR

I have already in the opening section of this chapter indicated the reasons which on my rapid marches across the fascinating ground of Udyāna, during the last days of April, 1906, precluded any systematic survey of the plentiful ruins I passed *en route*. As I rode, on April 28, by the broad military road from Chakdara towards the Panjkōra there was no time to revisit the remains of Stūpas and monasteries in the Adīnzai plain, nor to examine the ruins of ancient towers and habitations which I knew to dot numerous low spurs projecting into the open fertile valley of Wuch. As the road turning westwards approached the easy Kātgala Pass dividing the Swāt and Panjkōra drainage, I caught a good view of the picturesque ruins of ancient fortified dwellings rising above the scrub-covered slopes on the south, and reluctantly had to pass them. In the burning afternoon sun they looked, indeed, what their local Pashtu name *Sarē-māṇai*, derived from the colour of the sandstone material, calls them, 'the red houses'. That these, like the similar ruins seen at so many points on high ground above the Swāt River, belonged to the Buddhist period is certain. Only a close survey, however, such as I was able to effect in January, 1912, at similar sites near Pālai, south of the Swāt Valley range, could furnish the definite evidence.[1] **Ruins in Adīnzai Valley.**

But after we had entered the broad valley of Tālāsh (Fig. 11) with its wide vista across the Panjkōra to the snow-covered ranges above Bājauṛ, and reached the Levy post of Kuz-Sarai, I could not forgo my intention of using what little remained of the day for my first piece of archaeological survey work on this journey. At the hamlet of Gumbat, some two miles to the west-south-west of Kuz-Sarai, I had found the comparatively well-preserved ruins of an ancient Hindu temple, first mentioned by Colonel Deane,[2] and closely resembling in plan and style shrines I had seen in the Salt Range. But there had been no time then to effect a proper survey, and now, too, the work had to be done in a hurry, **The Valley of Tālāsh.**

Soon after turning off south from the main road I found myself in the large and shady grove of Jalāl Bāba Bukhārī's Ziārat, the much frequented shrine of an orthodox Muhammadan saint whose worship is, as so often elsewhere, manifestly but a survival from the days when the ruined Hindu shrine attracted its pious pilgrims. As I rode up the terraced slopes along the lively little stream which spreads fertility over its alluvial fan, I came unexpectedly, about half a mile south-west of the shrine and on the left bank of the stream, upon a massive wall of Gandhāra masonry about fifteen feet high. It had evidently been built to support a terrace of cultivation behind it. On ascending the steep path to the hamlet of Gumbat we passed more walls of similar construction. Some seemed to have belonged to ancient dwellings, but the majority, no doubt, had been intended for terraces. The present Pathān settlers, quite incapable of such solid structures, had been content to profit by them. The remains of ancient dwellings they had long ago quarried away to secure materials for building their huts and enclosures.

From the narrow gullies of the hamlet, where the ponies had to be left behind, I ascended to the ruined temple (see Fig. 3), from which the place derives its name of *Gumbat* or 'dome'. It occupies a small bit of level ground, just above the last huts, which has been secured in part by cuttings from the rocky slopes to the south and west. The situation recalled to me closely that **Temple ruin of Gumbat.**

[1] See my *Archaeological Survey Report, Frontier Circle*, 1911–12, pp. 3 sqq. There is in Raverty, *Notes on Afghānistān*, p. 202, an interesting reference, taken from a Yūsufzai chronicle, to ruins of a town in Tālāsh, once occupied by the chiefs and headmen of the 'Dihgán Káfirís' in that tract. Possibly the ruined dwellings seen south of Bar-Sarai on the west of the Kātgala Pass are meant.

[2] Cf. *Notes on Udyāna, J.R.A.S.*, 1896, p. 664.

of the Sāt-ghara temples at Ketās in the Salt Range.[3] A small stream fed by springs passes close by the east face of the ruin, and waters some fine Chinārs growing near it. The temple had already suffered badly when I first saw it in 1897, most of the finely cut sandstone facing having been removed, as Colonel Deane heard it, by a former Khān of Dīr. It was sad now to find this stripping nearly completed by the villagers, a strange writing on the wall, as it were, by the hand of advancing 'civilization'. What carved stone still remained in 1897 on the east and north wall faces had been all carried off since. Thus I found in Gumbat itself several fine slabs of yellowish sandstone, including a large block, once belonging to a corniced frieze or a pilaster capital, walled into a blacksmith's furnace. The interior of the trefoil-arched porch on the east and the inner wall faces of the cella had suffered less damage, and the careful stone lining of the narrow passage encircling the vaulted chamber of the upper story was still intact in great part, its less accessible position affording protection.

Constructive features of ruin.

In spite of all this damage the measurements obtained on the south and the east faces where the large corner slabs of the base were still in position, together with the indications afforded by similar structures in the Salt Range and on the Indus, made it possible rapidly to prepare the ground plan shown in Plate I. This shows that the main feature of the shrine consisted of a single cella, 9 feet 8 inches square, approached on the east by a porch 9 feet broad. The original depth of this porch was doubtful, as its outer masonry had completely disappeared. That it was once surmounted by a trefoil arch was shown by what remained of the upper portion of its side walls. The dimensions of the entrance leading from porch to cella remained also uncertain; but traces of mouldings surviving above it showed that its shape was rectangular. Flat pilasters had flanked it. The cella was surmounted by a dome of horizontal construction, resting on seven successively projecting courses which cut off the corners and converted the square into an octagon. The dome rose to a height of 13 feet 8 inches from the floor of the cella. The porch was flanked on either side by a small recess about 2 feet 6 inches deep and 1 foot 6 inches wide. The one on the south, at a height of about 6 feet, gave access to a narrow flight of stairs built in the thickness of the cella wall, and leading to a corridor about 1 foot 3 inches wide. This formed a passage on three sides round a vaulted chamber, surmounting the cella dome at a height of 17 feet 6 inches above the base and forming an upper story. The passage, about 5 feet 6 inches high, seems to have led to another flight of stairs, which probably served for the approach of a third story. But, as the highest part of the existing structure does not rise above 27 feet from the top of the base, the height of the third story, and of the stone roof which must once have crowned the whole temple, could not be determined.

Decoration of walls.

Owing to the outer walls having been completely stripped of their sandstone facing, as seen in Fig. 3, the external measurements of the structure could not be secured with absolute accuracy. On the east face 21 feet 3 inches were measured between the existing corners of the bold mouldings surmounting the base (seen on right of Fig. 3). The south face showed a central projection 10 feet 6 inches long, between flanking portions each of 5 feet 2 inches. A niche, 2 feet 6 inches square, occupied the centre of each wall face, a little above the level of the cella, except on the east, and was, no doubt, meant to shelter some divine image. The interior masonry consisted throughout of roughly hewn sandstone set in very hard mortar. Like the inner walls of the cella, which still showed carefully smoothed sandstone slabs, 15 to 19 inches long and 4 to 6 inches high, laid in regular courses, the exterior walls had also once possessed their proper facing of carved stone. Though this had weathered badly, I was still able in 1897 to distinguish remains of

[3] See Cunningham, *Archaeological Survey Reports*, v. pp. 84 sqq.

elaborate decorative friezes carved with diapers of the 'beehive', and Amalaka ornaments reminiscent of the ruined Hindu shrines of Ketās, Malōt, Amb, &c., in the Salt Range.

Resemblance to Salt Range temple ruins.

It is to these shrines also, and the temples I have since been able to survey at the two Kāfirkōṭ sites on the Indus, that the Gumbat ruin shows closest resemblance in regard to all structural features. This will be evident from a glance at the plans and photographs furnished for the Salt Range ruins in General Cunningham's Reports and for those of the Indus sites in my own.[4] The arrangement of the cella with the vaulted chamber above it, and the method of approach to the latter, correspond exactly to the dispositions observed in the main Ketās temple and in the pendant shrines B, C of the Bilōt Kāfirkōṭ. The latter approach the Gumbat ruin very closely in dimensions, and their resemblance in ground-plan would be still more striking if at Gumbat the porch had not suffered so severely from vandal hands. The destruction here of all architectural ornament has deprived us of the chance of proving in detail that the decorative motifs observed in the Salt Range and by the Indus were mainly derived from the later development of Graeco-Buddhist art in Gandhāra, as I have suggested elsewhere.[5]

Style of architecture.

But the survival in the Gumbat porch of remains of the trefoil arch furnishes by itself a very characteristic indication. This architectural feature was long considered peculiar to the style of the old Kashmīr temples, where it first attracted attention. But its presence is obvious in the far older remains of Gandhāra Vihāras and their sculptural representations, and M. Foucher, in his masterly analysis of architectural art in Gandhāra, has proved that its true origin must be looked for there.[6] It is the prevalence of the trefoil arch in the Salt Range temples and those of Kāfirkōṭ, which mainly accounts for the theory expressed by General Cunningham that their style was directly developed under Kashmīr influence. The critical analysis of the historical records of the Kashmīr kingdom has proved that its political power, which was supposed to account for this influence, was at all times restricted to a far more modest area than earlier writers assumed. It is only the rarity of architectural remains of later date in Gandhāra, which has hitherto obscured the fact that the characteristics of the Salt Range temples of the centuries preceding the Muhammadan conquest can be traced to the direct development of that Graeco-Buddhist style, which had found its earliest and best known expression in the ruined shrines of Gandhāra. Hence the special significance of the Gumbat ruin: it furnishes an example of this later development on ground which in art and culture was most closely bound up with Gandhāra. There are no means of fixing the date of the temple with any approach to exactness. But taking into account what is known of architecturally related remains elsewhere, I am inclined to take the seventh and ninth centuries as the approximate limits of time.

Marches along Panjkōra River.

The two long marches which carried me from Sado along the Panjkōra to Dīr were far too rapid to permit of any close observation or inquiries. Nevertheless, I was struck by the absence on the hill-sides I was skirting of those large groups of ancient dwellings and towers which are so conspicuous on the spurs overlooking the Lower Swāt Valley and Tālāsh. Yet lower down by the river the fortified villages of the modern Pathān inhabitants were abundant. In the large and fertile village tract of Dīr, beyond the Panjkōra, it is true, I had to spend two days of enforced halt (May 1 and 2). But the conditions in which these were passed, as described in my personal narrative,[7] effectively precluded anything more than inquiries, and these did not reveal the existence

[4] Cf. *Archaeological Survey Reports*, v., Pl. XXVI, XXVII; Stein, *Archaeological Survey, N. W. F. P.*, 1904–5, pp. 14 sq. (Figs. v, vi); *Archaeological Survey, Frontier Circle*, 1911–12, pp. 7 sqq.

[5] See my *Archaeological Survey, Frontier Circle*, 1911–12, p. 8.

[6] See *L'Art du Gandhâra*, i. pp. 129 sqq., 139 sqq.

[7] See *Desert Cathay*, i. pp. 19 sq.

of ruins in the vicinity.[8] Yet the presence among the old coins, which the Hindu tradesmen of the local Bāzār had to show me, of a number of Kuṣana and later Indo-Scythian copper coins pointed to early occupation.

People and language of the Dīr Kōhistān.

I was also able to secure two men from Kalām, in the Swāt Kōhistān, for the purpose of linguistic and anthropometrical examination. Their speech proved to be identical with Gārwī, a language of the Dard group. This they declared to be spoken also by the people of the Dīr Kōhistān in the valley of the easternmost branch of the Panjkōra, from Patrāk to Tal. Of 'Dīrī', which Dr. (now Sir George) Grierson's survey of the 'Piśāca languages' mentions as a separate form of speech about Dīr,[9] I vainly endeavoured to obtain information. And if Gārwī prevails also on the Panjkōra headwaters above Dīr, it is difficult even to guess where 'Dīrī' can be located; for in the smaller valleys north and west of Dīr Pashtu is now alone spoken, though the appearance of the people indicates that their descent is largely from Dard stock. The lively recollection retained at Dīr of Kāfir raids within the present generation is of interest as affording evidence of the times still recent when both banks of the Kūnar above Asmār formed part of Kāfiristān or, as Marco Polo calls it, 'Pashai'.[10]

Racial origin of Kōhistānīs.

That the Kōhistānīs of Dīr and those further eastward on the Swāt River's headwaters are a remnant of the population which held the Panjkōra and Swāt Valleys during Buddhist times, and were dispossessed by the invasions of Yūsufzai Pathāns, as Colonel Deane first suggested,[11] appears probable. The local traditions, which he and Colonel H. S. Godfrey quote,[12] seem to retain a recollection of this origin; but they evidently do not go back much beyond the conversion to Islām, which is alleged to have taken place here some eight or nine generations ago. If, in the absence of anthropological data, linguistic affinity is taken as a guide, these Kōhistānīs of Bashghar or Bashkār, as the valleys at the headwaters of Panjkōra and Swāt are collectively known, are certainly to be classed as of Dard stock. And the assumption of the same origin for the inhabitants of Buddhist Udyāna would agree well with surviving philological and historical evidence.

[8] This negative result is not in contradiction with the statement made in Col. S. H. Godfrey's interesting paper on the Panjkōra Kōhistān, *Geogr. Journal*, 1912, xl. p. 50, concerning the existence of ruined houses and forts of early date in 'the Talash and Dushkhel Valleys of Dir'. The Dushkhel tract adjoins Tālāsh on the south-east and, of course, belongs to Swāt, not to Dīr, though brought in recent years under the control of the Nawāb of Dīr.

[9] See Grierson, *Piśāca Languages*, p. 6.

[10] Cf. above, p. 11.

[11] See *Notes on Udyāna*, *J.R.A.S.*, 1896, pp. 661 sq.

[12] See Colonel Godfrey's paper *A summer exploration in the Panjkora Kohistan*, *Geogr. Journal*, 1912, xl. pp. 50 sqq. I doubt whether much reliance can be placed on the alleged claim of some Dashui Kōhistānī communities that their ancestors built the ruined houses and forts noticed in Lower Swāt and especially in the Dushkhēl tract. It is suggestive of 'popular etymology'. In any case those ruins must have been deserted and unheeded for long centuries before the assumed emigration from Swāt of those Kōhistānīs' ancestors.

CHAPTER II

THROUGH CHITRĀL AND MASTŪJ

Section I.—CHITRĀL IN ETHNOLOGY AND HISTORY

Arrival in Chitrāl.

On May 4 I gained access to Chitrāl by crossing the Lowarai Pass, still a formidable obstacle at that season, through gorges deeply choked with the snows of avalanches (Fig. 2). Among the alpine territories flanking the main Hindukush range on the south, Chitrāl with its mountains of barren grandeur, its fertile if narrow valleys, its curiously mixed population, and the manifold indications of an old and relatively well-developed civilization, offers special attractions alike to the student of geography, ethnology, and antiquities. Chapters III and IV of my personal narrative will show how deeply I felt these varied fascinations, and how great my regret was at the very limited range which the unavoidable rapidity of my passage imposed upon my inquiries. The fact that my travel and stay in Chitrāl were confined to a week will explain why my present account can touch only the main geographical relations of the country, the few early historical data, and such antiquarian observations as I was able to make *en route*.

Political importance of Chitrāl.

The political importance of Chitrāl, the interesting mixture of its population, and the advanced economic conditions prevailing all find their explanation in the fact that nature has placed Chitrāl on the line of the nearest, and in many respects the easiest, trade route between Central Asia and the extreme north-west of India proper. A series of natural features combine to favour the line of communication which connects the valleys of the Indus and Oxus through Chitrāl. The fertile valley of the Kūnar, accessible from the side of the Peshawar and Swāt Valleys by a number of passes all considerably lower than the Lowarai, provides an excellent thoroughfare, leading due north without inconvenient détours, which is open to laden traffic at all times of the year. In the case of all routes which lie to the east of it, a succession of high outer ranges have to be surmounted before the main Hindukush watershed is approached, while the valleys are not only narrow and difficult, but are devoid of that surplus produce which in a mountainous region is essential for fostering traffic.[1]

Main routes through Chitrāl.

There is no lack of local resources anywhere in the ascent of the main Kūnar river valley up to the large cluster of villages which forms the Chitrāl capital, and from which the territory derives its current modern name.[2] The same favourable conditions continue in the side valley of Lutkhō,

[1] It is this want of spare food supplies and fodder which has constituted at all times so serious an obstacle to the use of the routes leading from Kashmīr through Gilgit, Yasīn, and Hunza, whether for trade or military purposes. It would affect also traffic through the Yārkhūn Valley notwithstanding the easy passage northward afforded by the Barōghil saddle.

[2] The old indigenous name, and one still in current use both in the hill state itself and the adjoining territories, is *Kāshkār*. This term includes both Chitrāl proper, or 'Lower Kāshkār', and 'Upper Kāshkār', comprising the main valley from some distance below Mastūj along with the important side valleys which join it from the Hindukush watershed. Cf. Biddulph, *Hindoo Koosh*, pp. 59 sqq.; and the explicit statement given by Raverty, *Notes on Afghānistān*, p. 152, from Mughul Bēg's surveys dating from the end of the eighteenth century: 'Under the general name of Ḳáshḳár are included two tracts of country: one Ḳáshḳár-i-Pá'ín, or Lower Ḳáshḳár, also called Chitrál, which, on account of *l* being interchangeable with *r*, is also called Chitrár, and the other Ḳáshḳár-i-Bálá or Upper Ḳáshḳár, or Mastúch, from its chief town.'

For an early Chinese rendering of the name *Kāshkār*, see below, p. 31.

into which the main trade route turns a short distance above Chitrāl proper, and by which after a couple of marches the Dorāh Pass is gained. The latter, practicable to laden animals for nearly half the year, offers an easy approach to the valley of Zebak by which, as seen above, the fertile tracts of Badakhshān and Wakhān on the uppermost Oxus lie equally open.

Compared with the route across the Dorāh, the one which ascends the Chitrāl or Yārkhun river to its headwaters near the Barōghil, and which I myself followed, can never have been of more than secondary importance. For until the modern mule-track was constructed, the precipitous rock-slopes of the gorges, through which the river has cut its way between Chitrāl and Mastūj, almost closed it to laden traffic, while higher up during the summer, a season otherwise favourable, the floods of the Yārkhūn rendered access to the Barōghil and the Āb-i-Panja branch of the Oxus difficult.

Relations with Badakhshān.

The facility of communication with Badakhshān and the Oxus regions is reflected alike in trade, political, and other relations. The Chitrālīs themselves do not appear to have ever been traders, if we except only the export of slaves in which their rulers indulged until comparatively recent times. But their country has probably seen for many centuries past a brisk flow of the traffic which is still carried on extensively between Indus and Oxus by the enterprising Pathān traders of Bājaur, whose colonies are to be met with both east and west of the Pāmīrs. The dues collected on this trade have always formed a considerable source of revenue for the Chitrāl rulers.[3] That the rulers were at different periods themselves of northern origin is proved not merely by the acknowledged Īrānian descent of the Katūr-Khushwakt dynasty, which still holds Chitrāl and Mastūj, and of the numerous privileged clans forming the Chitrāl aristocracy, but also by the traditions about repeated conquests from the Oxus side which, however vague chronologically, are yet plainly historical.[4]

Ethnography of Chitrāl.

But even more significant is the fact that in a great portion of the Lutkhō Valley, to the south-east of the Dorāh, the subject population consists of Badakhshī immigrants, known as Yidghāh (Fig. 21), whose speech is practically identical with the Eastern Īrānian language of Munjān, a hill district north-west of the Dorāh.[5] The presence of a Persian-speaking colony of Badakhshīs at Madaglusht near Kala Drōsh, the wide diffusion of the Maulai sect which has its modern home on the upper Oxus, and the increase in the number of settlers from Wakhān are additional evidence of the strong Īrānian influence to which the autochthon population of Chitrāl must have been exposed from early times.[6] It is, therefore, easy to understand why the physical characteristics of the Chitrālīs (Fig. 7), as far as I could judge by appearance, seemed to me practically indistinguishable from the *Homo Alpinus* type, which is uniformly represented by the Ghalchah or Īrānian-speaking hill tribes in the Oxus region and around the Pāmīrs. The expert analysis, undertaken by Mr. T. A. Joyce, of the anthropometrical materials I collected during my stay at the Chitrāl capital may be expected to show to what extent that impression was true.[7] The evidence would be still more conclusive if it

[3] See Biddulph, *Hindoo Koosh*, p. 66. For detailed references as to this trade in the eighteenth century, cf. Raverty, *Notes on Afghānistān*, pp. 153, 157 sq., 161.

[4] See Biddulph, *Hindoo Koosh*, pp. 63, 150 sqq.; also below, p. 28 sqq.

[5] See Biddulph, *Hindoo Koosh*, pp. 63 sq.

[6] Mughul Bēg, extracts from whose surveys about the close of the eighteenth century have been published by Raverty, calls Kāshkār or Chitrāl a territory 'inhabited almost exclusively by the Tājzīk race'; *Notes on Afghānistān*, p. 152 sq. It is a significant statement, especially as the author is not likely to have been influenced by either historical or philological considerations.

[7] For some description of the physical features of Chitrālīs cf. Biddulph, *Hindoo Koosh*, pp. 72 sq.; also *Desert Cathay*, i. pp. 32 sq. Colonel Biddulph, a well-qualified observer, points out 'that a strong bond of kinship exists between all the Dard and Ghalchah tribes'. But he also rightly draws attention to the special good looks of 'the Khōs of the "Fakir Mushkin" class in Chitrāl, who show certain physical peculiarities not shared by the other Dard tribes'. [Cf. now Joyce, *Notes on the Physical Anthropology of Chinese Turkestan and the Pamirs*, in *J. Anthropol. Inst.*, xlii. pp. 453 sqq.]

7. CHITRĀLĪS AND MASTŪJĪS, ANTHROPOMETRICALLY EXAMINED.

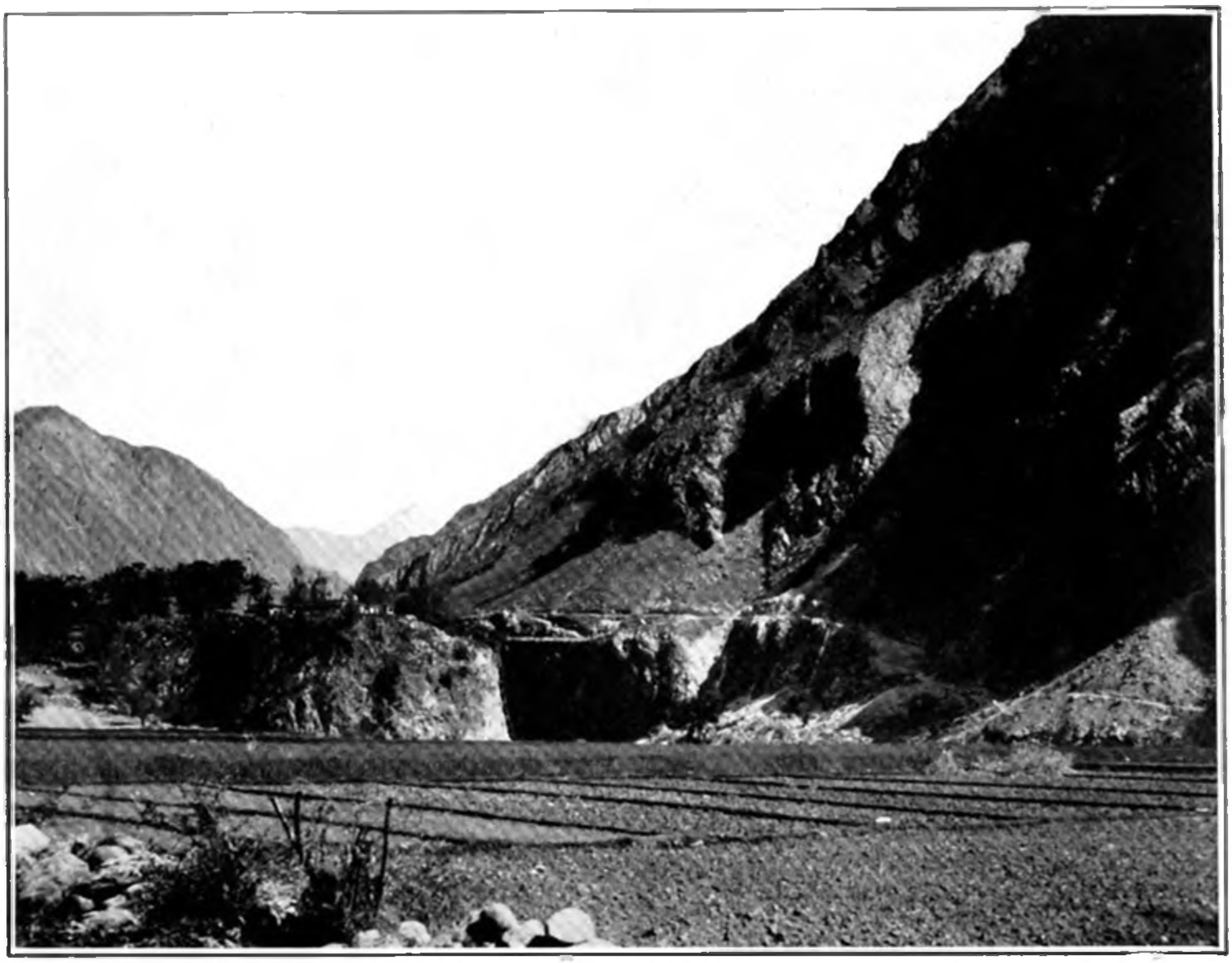
9. BASHGOL KĀFĪRS, ANTHROPOMETRICALLY EXAMINED AT CHITRĀL AGENCY.

8. BASHGOL KĀFIRS, ANTHROPOMETRICALLY EXAMINED AT CHITRĀL.

10. BASHGOL KĀFIRS, BEFORE BĀZĀR-MASJID, CHITRĀL.

11. VIEW OF TĀLĀSH VALLEY, FROM KUZ-SARAI, TOWARDS BĀJAUR.

13. MASTŪJ FORT, WITH VIEW DOWN YĀRKHŪN VALLEY.



12. FORT OF GAHIRAT WITH VIEW DOWN CHITRĀL VALLEY.

14. VIEW FROM SHUYIST ACROSS YĀRKHŪN RIVER TOWARDS SHAYŌS GLACIER.

could be checked by an adequate number of measurements taken among 'Dard' tribes further south-east, such as those of Astōr and Gurēz, whose difference in appearance from the 'Dard' speaking Chitrālis appeared to me striking. In any case it is clear that, as far as Chitrāl is concerned, the Hindukush can neither in a linguistic nor in an ethnic sense be considered to form a true watershed.

The composite racial character of the present Chitrāl population is reflected also in the languages spoken in the territory. In the main valley of Chitrāl from below Mastūj to Drōsh as well as in the large side-valleys northward, collectively known as Kāshkār-Bālā, the bulk of the people, whether they belong to the autochthon stock of cultivators or to the ruling classes, speak Khōwār. The term is derived from *Khō,* the name by which the cultivators designate both themselves and their country. Khōwār or Chitrālī, as it is also called, forms a separate group among the languages which Sir George Grierson calls 'Modern Paiśācī', and to which it was the custom to apply the historical term 'Dard', without regard for its more limited modern use. Occupying an intermediate, and somewhat independent, position between the Kāfir and Eastern groups, Khōwār 'often shows striking points of agreement with the Ghalchah languages'.[8]

Languages spoken in Chitrāl.

This relation to the Eastern Īrānian language group in the north and north-east deserves special attention in view of the ethnic links already referred to. Whatever the explanation of this linguistic connexion may be, it is a significant fact that in the Lutkhō Valley of Chitrāl a Ghalchah dialect is actually spoken by a large and apparently old settlement from Munjān.[9] In view of what has been said above as to the former extension of Kāfiristān into the Kūnar Valley, it can scarcely cause surprise to find the Kalāshā Kāfir dialect spoken by numerous settlements in side-valleys immediately to the south-west of the Chitrāl capital and also in the main valley below it (Figs. 8–10). Further down in the portion of the Kūnar Valley, which extends to the debouchure of the Bashgol River and which has long been counted as a part of Chitrāl, the language spoken is Gabar-bati or Naristi, another Kāfir dialect. Even the Shīnā or proper Dard group of Sir George Grierson's 'Modern Paiśācī' languages is represented by 'Dangarik' colonies found between Ashret and Drōsh along the left bank of the Chitrāl river.[10] In addition, the presence in Khōwār, as in other 'Modern Paiśācī' languages, of non-Aryan words traceable to the Burushaskī language surviving in Hunza-Nagar supplies, in all probability, evidence for the earlier occupation of these valleys 'by the ancestors of the present speakers of Burushaskī whom they [the Khō, Dards, &c.] expelled or absorbed'.[11]

In spite of such a great racial and linguistic mixture Chitrāl, as far back as historical records go, appears always as an organized political unit under the rule of a recognized dynasty. This fact is all the more striking when it is compared with the agglomeration of amorphous tribal communities which even our own generation has found adjoining Chitrāl from the west, south, and south-east. Yet the natural obstacles raised to peaceful intercourse and co-ordination by the barriers of high mountains and difficult gorges were quite as great in Chitrāl, if not greater, than in the surrounding valleys held by these far more primitive communities. It is, I believe, necessary to recognize in the political consolidation of Chitrāl the result of a more developed civilization which itself was

Political organization of Chitrāl.

[8] See Grierson, *Piśāca Languages*, p. 6. It is true that 'the name Dard is not acknowledged by any section of the tribes to whom it has been so sweepingly applied' (Biddulph, *Hindoo Koosh*, p. 156). Yet, as the classical references and many passages in Sanskrit literature show, it must have once been widely used as a general designation for people in the Upper Indus region. Its ancient application was, no doubt, very vague. But this does not seem to me in itself to constitute a valid reason against the scientific employment of a term which has the great advantage of being significant, short, and historical in origin.

[9] See above, p. 26.

[10] Cf. for these various settlements Biddulph, *Hindoo Koosh*, p. 64.

[11] See Grierson, *Piśāca Languages*, p. 4.

mainly derived from the advantages enjoyed by Chitrāl through its vicinity and easy access to Badakhshān, an ancient seat of culture and material prosperity.

Material civilization of Chitrāl.

Along with other observers, I was impressed from the outset by the far higher standards in comforts of life, manners, and methods of cultivation which I noticed as soon as I had entered Chitrāl. But how could I attempt here to justify these impressions in detail, when I had scarcely more than a week of busy travel for catching glimpses of all the varied economical and social conditions which would claim long months or years of careful observation and study? For a record of my impressions I must refer to Chapters IV and V of my personal narrative.[12] At the same time I must express the earnest hope that the fascinating field which Chitrāl along with Mastūj offers for systematic geographical, ethnographical, and anthropological researches, will find its qualified students before old-world conditions are seriously changed by the action of the Indian influences which modern political relations are fostering. Much, if not most, of what I was able to observe as regards the material civilization of Chitrāl distinctly recalled Turkestān, while India seemed to lie far behind me in customs and conditions alike. With so much before my eyes that betokened direct importation from Badakhshān, it was impossible not to realize how important a part the ancient civilization established by the Oxus must have played in shaping the past of Chitrāl.

Historical traditions of Chitrāl.

Unfortunately, the materials for reconstructing this past are extremely scanty. No written accounts of Chitrāl history have survived in the country itself, and the oral traditions which Colonel Biddulph collected are, as I was able to test by inquiries, for the period preceding the eighteenth century confined to recollections so vague and disjointed as to afford practically no historical indications whatever. The genealogy of the still ruling family of the princes or Mehtars, bearing the name of *Katūr* in its main branch, reaches back to about the seventeenth century. This family is supposed to be descended from a Khorāsān adventurer adopted by the last of an earlier line of rulers known as Ra'īs.[13] All that is stated of these is that they are believed to have been related to the family which ruled Gilgit before the introduction of Muhammadanism,[14] and 'that during the rule of one of them a Calmak or Chinese army, in alliance with a prince of Badakhshān, invaded and subdued the country'. To an earlier epoch is assigned the legendary story of a king Bahman, an idolater, who, after repeated efforts to defend Chitrāl, succumbed to an Arab army which had previously conquered Badakhshān and Wakhān.

Chitrāl in the Chinese Annals.

Exceedingly meagre and chronologically indeterminate as these traditions are, they yet show plainly a recollection of conquest from the Badakhshān side.[15] The point deserves notice all the more because the only historical record, which has so far come to light about Chitrāl in the pre-Muhammadan period, concerns an event of this kind. It is preserved in the Chinese annals of the T'ang dynasty, and was first elucidated by me in *Ancient Khotan*.[16] The facts which it records were the direct outcome of the political situation created by Kao Hsien-chih's successful expedition in A.D. 747 against the Tibetans in Yasīn and the subsequent Chinese occupation of that territory

[12] Cf. in particular *Desert Cathay*, i. pp. 32 sq., 37 sq., 48 sq. For a general description of the economic and social conditions of Chitrāl cf. Biddulph, *Hindoo Koosh*, pp. 61 sqq.; Robertson, *Chitral*, passim.

[13] See Biddulph, *Hindoo Koosh*, pp. 150 sqq. That there are certain chronological difficulties affecting the genealogical record of the Katūr dynasty and its Khushwakt branch holding Mastūj and Yasīn, even for the recent period it embraces, has been pointed out by Raverty, *Notes on Afghānistān*, pp. 305 sq.

[14] The adoption of Islām by the rulers of Gilgit is conjecturally placed about the commencement of the fourteenth century by Biddulph, *Hindoo Koosh*, p. 134. But this chronology rests solely on approximate calculation from a genealogical list which cannot be critically tested. Raverty, *Notes on Afghānistān*, p. 300, note §, expresses the belief that this conversion took place much later, and a reference of Mīrzā Ḥaidar distinctly supports this view.

[15] For invasions from Badakhshān in recent times cf. Biddulph, *Hindoo Koosh*, p. 153; *Imp. Gazetteer*, x. p. 301; Ritter, *Asien*, vii. p. 14; Raverty, *Notes on Afghānistān*, p. 158.

[16] See *Ancient Khotan*, i. pp. 11 sqq., 15 sqq.

and of Gilgit. The most detailed account is to be found in two diplomatic documents which the great encyclopaedia *Ts'ê fu yüan kuei*, published in A.D. 1013, reproduces, and which M. Chavannes' research has rendered accessible.[17] One of these supplies the text of a representation which Shih-li ch'ang-ch'ieh-lo, the ruler (*jabgu*) of T'u-ho-lo or Tokhāristān, corresponding roughly to the present Badakhshān, addressed in A.D. 749 to the Imperial Court through an envoy charged with presents.

Representation of Tokhāristān ruler, A.D. 749.

His application ran thus: 'Near my territory there is a barbarian (*hu*) kingdom called Chieh-shuai 朅帥; it is situated amongst mighty mountains. Relying on the natural obstacles which offer it protection it resists the holy transformation (i.e. submission to the Imperial power); it allies itself with the Tibetans (*T'u-po*) and aids them. It knows that the territory of [Little] P'o-lü (i.e. Yasīn and Gilgit) is limited, its population dense; that the area for cultivation is small, and that consequently, when garrison troops are placed there, the supplies prove inadequate. It then becomes necessary to purchase salt and rice in Kashmīr (*Ku-shih-mi*), and it is thus that the difficulty is met. The traders' caravans, in going and returning, all pass by the kingdom of Chieh-shuai; its king has therefore accepted the presents offered by the Tibetans, who claimed to establish a stronghold in his territory with a view to getting possession of the important route that leads into P'o-lü. Since Kao Hsien-chih has opened up P'o-lü, there are three thousand more troops there, and P'o-lü has been exhausted by their presence. The king of Chieh-shuai, in alliance with the Tibetans, has taken advantage of the exhausted condition of P'o-lü and decided to invade it. I am constantly pre-occupied by the idea of destroying these perverse people once for all.'

The ruler of Tokhāristān in the further course of his representation then develops a bold plan of operations, which, if supported by Imperial forces from the 'Four Garrisons', i.e. Chinese Turkestān, would enable him 'to open up and conquer the Great P'o-lü (or Baltistān), and the countries to the east of it'. This would bring him in a straight line to Khotan, Kara-shahr, Sha-chou, and beyond into Kan-su, places where the Tibetans could then no longer maintain themselves. He requests the dispatch of Chinese troops to reach Little P'o-lü in the fifth and Great P'o-lü in the sixth month (roughly, June and July respectively). He solicits also that the king of Kashmīr, being a loyal ally of the Chinese and having great resources in troops, a dense population and abundant supplies, be encouraged by an Imperial edict and special presents to lend his aid to the enterprise.

Imperial brevet to king of Chieh-shuai.

The Emperor (Hsüan-tsung) is said to have accorded the request of the T'u-ho-lo prince, and in fact the same encyclopaedia reproduces an Imperial brevet, dated A.D. 750, which invests Su-chia with the title of king of Chieh-shuai in place of his rebel brother P'o-t'ê-mo.[18] This interesting document from the Imperial chancellery is addressed to Su-chia, elder brother of P'o-t'ê-mo, king of Chieh-shuai, and amidst much stately phraseology about Imperial recognition of merit mixed with paternal advice, tells him: 'You and your ancestors, from generation to generation, have been full of loyalty and sincerity. Residing apart in a distant country, you have for a long time loved wisdom; you were early renowned for your braveness and justice. Recently, since P'o-t'ê-mo was not filial towards you and not faithful towards the Empire, you were a victim of grave injustice, and for a long time were submerged and rejected. Now the perverse faction has been annihilated, the wicked conspirators have been made prisoners. You have at once offered your loyalty and your devotion to the Empire. You have shown your kindness and your benevolence towards your barbarian people,' &c.

The same events are narrated in a briefer fashion by the notice which M. Chavannes has

[17] Cf. Chavannes, *Turcs occid.*, pp. 214 sq., 296.

[18] See *Turcs occid.*, pp. 215 sq.

extracted from the great history, *Tzŭ chih t'ung chien*.[19] This narrates how the Jabgu of Tokhāristān, Shih-li-tan-ch'ieh-lo, in A.D. 749, dispatched an envoy to the Imperial Court with the following application: 'The king of Chieh-shih, 朅師, has personally attached himself to the Tibetans; he harasses and troubles the Little P'o-lü; he has established an army to obstruct its line of supplies. I, your subject, desire to destroy this perverse man. I pray you to send troops of An-hsi[20] which next year in the fifth month will reach the Little P'o-lü, and in the sixth arrive in the Great P'o-lü.' 'The Emperor gave his assent. In the ninth year T'ien-pao (A.D. 750), in the second month, Kao Hsien-chih, general of An-hsi, triumphed over the kingdom of Chieh-shih and made its king P'o-t'ê-mo prisoner. In the third month Su-chia, elder brother of P'o-t'ê-mo, was appointed king of Chieh-shih.'

Chieh-shuai (Chieh-shih) identified with Chitrāl.

In discussing in *Ancient Khotan* the bearing of these records on the story of the Chinese occupation of Yasīn and Gilgit, I have already set forth in detail the reasons which have convinced me that by the territory called *Chieh-shih* or *Chieh-shuai* must be meant Chitrāl.[21] The most conclusive proof is supplied by a record in the detailed notice which the T'ang Annals contain on T'u-ho-lo or Tokhāristān. After the mention of an event which belongs to the year A.D. 729, there follows the statement that a 'neighbouring barbarian people, that of Chieh-shih, proposed to lead the Tibetans (*T'u-po*) to an attack upon T'u-ho-lo.[22] Thereupon the Jabgu Shih-li mang-ch'ieh-lo[23] prayed that troops of An-hsi might come to his help to meet it. The Emperor, by his favour, caused troops to move which defeated the enemy.' As the notice proceeds in chronological sequence to mention the military help which T'u-ho-lo rendered to the Emperor in A.D. 758 in his struggle with rebels, it may be considered certain that the expedition against Chieh-shih here mentioned by the T'ang Annals is identical with the one of A.D. 750, by which, as seen, P'o-t'ê-mo, king of Chieh-shuai or Chieh-shih, was defeated, and his elder brother Su-chia set up as king in his place.

Notice of Chitrāl in T'ang Annals.

The mention here made of Chieh-shih as a territory adjoining Tokhāristān, and one through which the latter was exposed to Tibetan aggression, would by itself suffice to suggest the identity of Chieh-shih with Chitrāl; for a glance at the map shows that for the Tibetans, already established on the Indus as far as Baltistān and struggling for the possession of 'Little P'o-lü' or Gilgit-Yasīn, the line of advance against Badakhshān would necessarily have led through Chitrāl. But this identification is made still more certain by a subsequent passage in the T'ang Annals' notice of Tokhāristān describing the territory of *Chieh* 劫, a manifest abbreviation of Chieh-shih.[24] 'It is situated in the midst of the Ts'ung-ling mountains; to the west and the south it is bordered by (the territory of) Shê-mi; to the north-west are the I-ta or Hephthalites.' As the seats of the latter are placed by the same notice in Tokhāristān, which in its main portion south of the Oxus undoubtedly corresponds to Badakhshān,[25] it is clear that Chieh or Chieh-shih which adjoined this on the south-east must be represented by the present Chitrāl.

[19] See Chavannes, *Turcs occid.*, p. 214, note 2.

[20] By An-hsi 'the West-protecting [garrison]' is meant Kuchā, then the administrative centre of the 'Four Garrisons', representing the Chinese protectorate in the Tārīm Basin and to the north of it.

[21] The graphic difference in the second character 帥 or 師 is very slight.

[22] See Chavannes, *Turcs occid.*, p. 158, where the name of *Chieh-shih* appears in the form of 羯師.

[23] The texts previously quoted replace *mang* 杧 by *ch'ang* 嘗 or *tan* 怛.

[24] See Chavannes, *Turcs occid.*, p. 159. In note 3 M. Chavannes had duly recognized *Chieh* 劫 as a form, abbreviated after the fashion usual in Chinese texts, of the name which appears as *Chieh-shih* 朅師 or *Chieh-shuai* 朅帥 in the encyclopaedias previously quoted (see above, p. 29) and as *Chieh-shih* 羯師 in the preceding passage of the T'ang Annals. But he had not attempted to locate the territory intended.

[25] Cf. Chavannes, *Turcs occid.*, pp. 155, 158; also *Voyage de Song Yun*, p. 24.

This identification necessarily leads us to recognize in the territory of Shê-mi the valleys of Kāfiristān, which border on Chitrāl to the west and south, and I have already above had occasion to show how well this location agrees with the description of Shê-mi given by Sung Yün, who passed through it on his way from Badakhshān to Udyāna.[26] The further details concerning Chieh or Chieh-shih given by the T'ang Annals' notice also accord well. 'The climate is always warm; one finds there rice, wheat, millet, and beans; sheep and horses are reared.' This description is remarkably appropriate to the open and fertile part of the main valley which contains the group of large villages collectively known as Chitrāl, and which must at all times have formed the political centre of the whole territory now called Chitrāl or Kāshkār. Here, at an elevation of about 5,000 feet, both climate and produce closely resemble those of the Kashmīr valley.[27] The notice places Chieh at 12,000 li from the Chinese capital, and mentions in addition the custom there prevailing of abandoning dying people in the mountains. It also records an embassy sent to the Imperial Court in A.D. 619, with presents of precious girdles and cups in glass and rock crystal.

Shê-mi identified with Kāfiristān.

It only remains to point out that the identification of Chieh-shih, which is established thus by topographical arguments, finds support also on the philological side; for, as I have shown elsewhere, the Chinese forms of the name can easily be accounted for as attempts to transcribe the local name Kāshkār, or an earlier form of it.[28] The application of this term to the territory of Chitrāl is well attested by Muhammadan sources from a relatively early date, and it is still in current use throughout these regions alongside the name Chitrāl, which perhaps was properly applicable to the capital only.[29] *Chieh-shih*, as an attempt to represent Kāshkār by Chinese characters, has its exact parallels in the varying forms *Chieh-ch'a* (Fa-hsien), *Ch'i-sha* (Chih-mêng), *Chia-shih* (T'ang Annals), *Ch'ia-sha* (Hsi-yü-chi), by which Chinese authors of successive periods have endeavoured to give a phonetic rendering of the old name of Kāshgar, the Turkestān town and oasis.[30]

***Chieh-shih*, an attempt to render Kāshkār.**

It is more than mere chance which has preserved this glimpse of old Chitrāl history precisely for that period. M. Chavannes has made it clear, in his masterly analysis of the Central-Asian records furnished by the T'ang Annals,[31] that the first half of the eighth century is a time of exceptional interest in the history of the great Central-Asian basins which extend east and west of the Pāmīrs. Chinese policy was then carrying on a protracted and vigorous struggle in the Tārīm Basin and the adjoining regions against two great powers for the control of the vast Central-Asian territories it had inherited from the Western Turks. Imperial power in those regions had to defend itself at the same time against Arab aggression from the west, and against the constant inroads which the Tibetans, then a nation of considerable offensive strength, were directing both into the basin of the Tārīm and into far-away Kan-su. In the course of this protracted struggle, which by the light of the Chinese historical records we can follow in its varying phases with tolerable accuracy, the endeavour of the Tibetans to join hands with the Arabs on the Oxus, and eventually to secure a fresh line of advance into Chinese Turkestān across the Pāmīrs, clearly defines itself. Formidable as the barriers raised by nature against aggression across the Hindukush and the Pāmīrs must seem to us, yet in reality the difficulties there encountered are far less than those which any large body of men would have to face in the endeavour to reach the Tārīm Basin from the inhabited parts of Tibet, across the high and forbiddingly desolate plateaus and ranges of the Kun-lun.

Importance of Chitrāl for Chinese dominion.

[26] See above, p. 9; also *Ancient Khotan*, i. pp. 14 sq.

[27] Cf. Biddulph, *Hindoo Koosh*, p. 60. Mughul Bēg, whose surveys are utilized by Raverty, says in his account of Kāshkār: 'Barley, wheat, and rice are produced in abundance'; see Raverty, *Notes on Afghānistān*, p. 153.

[28] Cf. *Ancient Khotan*, i. p. 15; Biddulph, *Hindoo Koosh*, pp. 58 sq.

[29] Raverty, *Notes on Afghānistān*, pp. 152 sqq., 161.

[30] Cf. *Ancient Khotan*, i. p. 48, where the references and Chinese characters for these forms have been recorded.

[31] See his *Turcs occid.*, pp. 290–99.

Chitrāl between Tibetans and Badakhshān.

It is this important geographical and strategic fact which explains the persistent efforts made by the Tibetans at this period to penetrate from the Indus Valley into Gilgit and Yasīn, and thus to secure access to the Pāmīrs across the Darkōt and Barōghil Passes.[32] Chitrāl, too, became an important objective to them; for not only was it possible for this hill state, if gained over to the Tibetan side, to render the position of the Chinese garrison in Gilgit untenable by interfering with its line of supplies from Kashmīr,[33] but through it lay also the most direct and convenient route from the Indus to Tokhāristān. The latter territory was constantly threatened by the Arabs from the middle Oxus, and had repeatedly sought Chinese aid to avert subjugation. Hence it was an important gain for Tibetan policy when P'o-t'ê-mo, the chief of Chitrāl, offered his assistance against this mainstay of Imperial influence on the Oxus.

Waning of Chinese influence.

The attempt of A.D. 750 was frustrated by Kao Hsien-chih's successful intervention in Chitrāl. But after the disaster which overtook him and the Imperial arms a year later to the north of Farghāna it is probable that Chinese influence south of the Hindukush speedily came to an end.[34] Soon afterwards the internal troubles of the Empire, due to the great rebellion of An-lu-shan (A.D. 756–8), threw open the whole of Kan-su and other parts of westernmost China to Tibetan aggression. By A.D. 766 the Tibetans had succeeded in completely cutting off the Imperial garrisons holding the Tārīm Basin, and the region immediately to the north of it, from China proper.[35] It is a reasonable conjecture that the opening of this wide new field for Tibetan enterprise north-eastwards must have caused a relaxation of their efforts in the west. This would explain why no more is heard of Tibetan activity from across the Hindukush and the Pāmīrs, and why as late as A.D. 758–9 auxiliaries sent by 'Tokhāristān and nine other kingdoms of the Western Countries' are mentioned by the T'ang Annals among the troops which helped the Emperor Su-tsung to reconquer his capital from the rebels.[36]

Recollection of Chinese intervention.

The notice we have just examined may claim special historical interest; for it shows that even small Chitrāl, behind its mountain ramparts, had a part to play in the events of a critical period which decided the fate of Chinese influence in Central Asia for many centuries. It would be tempting to seek a dim recollection of the facts revealed by this brief glimpse of Chitrāl history in the tradition which relates the invasion of the country by 'a Calmak (Chinese) army in alliance with a prince of Badakhshān'.[37] Unfortunately, exceedingly vague as local chronology is, there is reason to doubt whether the line 'of princes styled Reis' (*recte* Ra'īs), under one of whom this invasion is said to have taken place, can be extended as far back as the eighth century A.D. In fact, Colonel Biddulph's record states that the event 'is spoken of as occurring after the death of Abdoollah Khān, the Usbek',[38] who manifestly was a Muhammadan Turk from the side of the Oxus.

Local chronology of Chitrāl.

Abdullah Khān, the Turk, figures also in the succinct outline of traditional epochs with which Waffadār Khān, Dīwān-bēgī, an intelligent Chitrāl noble and official, supplied me during my stay

[32] For a synopsis of these efforts, cf. Chavannes, *Turcs occid.*, pp. 96 sq.; also *Ancient Khotan*, i. pp. 7 sqq.

[33] In *Ancient Khotan*, pp. 16 sq., I have fully indicated the routes by which the Chitrāl ruler could threaten the Gilgit line of supplies from Kashmīr where it crosses the Indus Valley. Such interference was facilitated if Chitrāl rule at the time extended, as it often has in more recent periods, also over Mastūj and the headwaters of the Chitrāl River; cf. *Ancient Khotan*, p. 16, note 31. For a similar extension of Chitrāl supremacy in Hsüan-tsang's time, cf. below, p. 44 sq.

[34] See Chavannes, *Turcs occid.*, p. 297; also above, p. 19.

[35] See the detailed account of these events given by M. Chavannes in Appendix A, *Ancient Khotan*, i. p. 534; *ibid.*, my summary, p. 63.

[36] Cf. Chavannes, *Turcs occid.*, pp. 158, 299. It is curious and significant of the eclipse of Chinese ambitions in Central Asia that Arabs (*Ta-shih*) figure among these foreign auxiliaries. They may have been mercenaries enlisted by the authorities of the 'Four Garrisons'.

[37] Cf. above, p. 28.

[38] See Biddulph, *Hindoo Koosh*, p. 150.

at Chitrāl. According to this statement the successive traditional periods comprised: the 'Kāfir-daur' or 'time of the Kāfirs'; the dynasty of the Ra'īs with which Chinese influence seems somehow associated in popular notion; the reign of Abdullah Khān, the Turk; of Khairullah Khān, from Gilgit; and finally the rule of the present family of Mehtars known as Katūr. Now the Khairullah Khān of this series is evidently identical with the Shāh Khairullah, Bādshāh, whom Mughul Bēg, the author of the surveys translated and explained in Raverty's *Notes on Afghānistān*, knew as the supreme ruler of the Kāshkār State, including Mastūj, about 1789-90,[39] and who is shown also in the genealogical table of the Khushwakt branch of the Chitrāl family in a chronological position approximately corresponding.[40] Hence Abdullah Khān, too, must probably be placed somewhere in the eighteenth century.

Chinese influence in 18th cent.

Whatever may be the explanation of the earlier traditional mention of Chinese invasion, it is certain that Chinese power made itself felt again in Chitrāl after the Tārīm Basin had been reconquered for the Empire under the Emperor Ch'ien-lung about the middle of the eighteenth century. As this reassertion of Chinese authority after the lapse of just a thousand years is curiously illustrative of the earlier records, the few references to it I have been able to trace may receive here brief mention. The most reliable among them is the definite statement made by the author of Raverty's Surveys that at the time he visited Chitrāl, about the year 1789, its ruler acknowledged Chinese sovereignty, and that under its protection inroads from the Badakhshān side had ceased.[41] The oral traditions recorded by Major Biddulph give a lengthy account, tinged with legendary details, of an invasion which a Chinese force in concert with the ruler of Badakhshān, Mīr Sultān Shāh, effected in Chitrāl at a time when Khush-āmad, a nephew of the founder of the Khushwakt branch and the elder brother of Khairullah, was ruling in Mastūj. After a lengthy siege of Mastūj, terms were agreed to, and the invaders retired up the Yārkhūn Valley, i.e. towards the Barōghil.[42]

Record of Chinese intervention.

There is a reference to the same invasion also in an extract from a Chinese geographical work published in 1790, which Klaproth appears to have first translated.[43] This deals with the territory of 'Bolor', which is described as situated to the south-west of Yarkand and to the east of Badakhshān, and which in view of the incidents mentioned can only be meant for Kāshkār-Bālā including Mastūj, and eventually also Yasīn.[44] In 1749 its prince, whose name, reproduced in Klaproth's French as *Chakhou Chamed*, is manifestly to be read as *Shāh Khush-āmad*, is said to have made his submission to the Chinese, and his territory was incorporated. In the following year his envoy 'Chah bek', i. e. Shāh Bēg, came to the Imperial Court. Another embassy is referred to in 1763. 'In the next year the country was invaded by Sultān Shāh of Badakhshān, whereupon the prince of Bolor asked support from the Chinese general residing at Yārkand. The latter called upon Sultān Shāh to evacuate Bolor and to stop hostilities. The king of Badakhshān conformed, and Shāh Khush-āmad wrote a letter of thanks. The two adversaries sent embassies to the Emperor with tribute, consisting of daggers which are of excellent quality in their territory.' In 1769

[39] See Raverty, *Notes on Afghānistān*, pp. 154, 158, 162; also *ibid.*, p. 306, note, where an attempt is made to utilize the date supplied by the surveys for clearing up the tangled chronology of the Khushwakt family.

[40] See Biddulph, *Hindoo Koosh*, p. 153, table.

[41] See Raverty, *Notes on Afghānistān*, pp. 154, 188.

[42] Cf. Biddulph, *Hindoo Koosh*, pp. 151 sq.

[43] See *Magasin asiatique*, i. p. 96. I take the reference from Biddulph, *Hindoo Koosh*, p. 152.

[44] Raverty, *Notes on Afghānistān*, pp. 305 sqq., has discussed Klaproth's notice of 'Bolor'. He has given reason to suppose that the term, which he prefers to spell *Bilaur*, was used, in the Muhammadan sources, both in a wider and a more restricted sense. In the latter it included mainly Kāshkār-Bālā with Mastūj and Yasīn, while in the former it was vaguely extended to the whole mountain region from the borders of Baltistān in the east to Kāfiristān in the west (see *loc. cit.*, pp. 307 sq.; cf. also the references given in *Ancient Khotan*, i. p. 6, note 5).

fresh tribute is said to have arrived from Bolor, and to have been offered ever since at the prescribed times.

The matter-of-fact account given by the Chinese record makes it clear that in the true sequence of events an invasion from the side of Badakhshān and Wakhān ended with Chinese intervention. The impression left by the latter was evidently strong, and accounts for the form given to the events in Chitrāl tradition. It is likely enough that the traditions about earlier Chinese invasions rest on historical facts not essentially different in scope and character.

Section II.—ANCIENT REMAINS IN CHITRĀL

List of archaeological remains.

The scanty nature of the data available for the history of Chitrāl made me doubly anxious to utilize whatever chance my rapid passage through the main valley might offer for a survey of any surviving remains. I knew that in a confined and relatively poor mountain region, where timber with rubble or rough stone-work must always have been the only building-material readily available, no conspicuous ruins could be hoped for. I had therefore all the more reason to feel grateful for the care which Captain E. Knollys, then Assistant Political Agent for Chitrāl, had taken to meet the request made by me in advance for the collection of local information about any existing remains. I owed it entirely to the list with which he kindly furnished me as soon as I had crossed the Lowarai, and to the detailed indications subsequently supplied under his instructions by Waffadār Khān, 'Dīwān-bēgī', that I was able to note down and in part to examine the objects of archaeological interest here recorded.

Rock-cut inscription at Gahirat.

The first 'antiquity' to which that list took me on my way up the valley, brought, it is true, some disappointment; for the rock-cut inscription reported about two miles above the fort of Gahirat (Fig. 12) on the left bank of the river proved only to contain a few rhetorical couplets in Persian, turned apparently after the model of Jahāngīr's famous line in the Great Moghul's palace at Delhi. They seem to have been engraved by order of some Chitrālī ruler of the eighteenth or nineteenth century. Insignificant this inscription looked on the magnificent rock-face rising precipitously to fully a hundred feet above the river, fit to receive the records of a 'king of kings', like those of Darius at Behistūn. Yet somehow it also struck me as a sign of the fact that Chitrāl could boast of a line of chiefs who, in spite of their limited mountain territory, have for centuries proudly carried the title of 'Bādshāh', and that their petty court was not foreign to Persian culture. Among the modern sgraffiti which the presence of these couplets had attracted, there were plentiful signs of Śiva's trident, marks, no doubt, of the religious propensities of the honest Gurkhas usually forming the Chitrāl garrison, and destined to become in future visible antiquarian evidence of the Indian political control now established for the first time in these mountains.

Absence of fortified villages.

If these first two days (May 4 and 5) of travel in Chitrāl which brought me to the 'capital' did not reveal any other distinct remains of the past, yet they helped to familiarize me with quasi-negative evidence of the autocratic rule which Chitrāl has owned for long centuries. In striking contrast to the valleys of Swāt and Panjkōra none of the large villages we passed, wherever the debouchures of side valleys afford soil and water for cultivation, showed any of those towers and fortified dwellings which in the settlements of the Pathān borderlands further south are held indispensable for safety. At points of importance for defence, such as Mirkanni and Drōsh, there rose indeed turreted strongholds which looked of some age. But these were in each case forts of the Mehtar intended to shelter his officials or to guard the route from the south.[1]

[1] Biddulph, *Hindoo Koosh*, p. 61, duly notes this 'evidence of a more secure state of society' as characteristic of the whole of Kāshkār, 'instead of every village having one, and sometimes two, forts sufficient to hold all the inhabitants, as is the case in the valleys draining directly into the Indus' (Gilgit, Hunza, &c.).

In the midst of the kaleidoscopic usurpations and upheavals which make the modern political history of this mountain-state like a tangled web of intrigue, murder, and treachery, security was for the ruler himself a primary consideration at all times. The castle of the Mehtars, with its high and massive square towers, built near the centre of the cluster of large embowered villages which make up the capital of Chitrāl, clearly bears the impress of the conditions.[2] Old as it undoubtedly is in its foundations and main features, this great pile of rubble and timber had undergone too many alterations and additions to permit even of the incidents of so recent an event as the memorable siege of 1895 to be always clearly located. But plenty of quaint old wood-carving, perhaps centuries old, still survived at the time of my visit, both in the mosque and the picturesque open galleries which enclose the outer court of the castle. Manifest signs of great age appeared also on its high iron-plated gate, through which successful pretenders had so often forced their way to the blood-stained 'Takht' of Kāshkār. Castle of Chitrāl.

Apart from this hereditary seat of the Mehtars, of which local considerations permitted only a very cursory inspection, the Chitrāl capital offered several other points of antiquarian interest. The remains of an old fort, said to be of the time of the 'Ra'īs' and marked by the ruins of some towers close to the Agency, displayed, it is true, in their rubble-built walls no distinct criterion of their age. Nor was it possible for me to deduce any definite chronological indication from the architecture of the fine old mosque, known as 'Bāzār Masjid' and believed to be the earliest structure of its kind in Chitrāl (Fig. 10). The style of its wooden columns and arches was plainly late Saracenic as found throughout Īrān.

But the old Chitrālī house which had been adapted for the Political Agent's residence before the upheaval of 1895, and which now hospitably received me, had already on my arrival acquainted me with characteristic features of genuine local architecture. In all its main rooms—from their size they might almost be called halls—beautifully carved pillars of Deodar disposed in a quadrangle supported the roof. The light-and-air holes of the usual Chitrālī type, to the interesting and ancient constructive features of which I shall have occasion to refer hereafter, had been surmounted by modern skylights. But the ornamental wood-carving of the pillars had suffered no adaptation or change, and here I was struck at once by the prevalence of motifs which seemed strangely familiar to me. Several of them, like the four-petalled clematis-like flower and the eight-petalled lotus within a circle, looked exactly as though copied from the pieces of ancient architectural wood-carving and decorated furniture which my excavations of 1901 had brought to light at the Niya Site of the Taklamakān,[3] and all plainly suggested the influence of the decorative style of Gandhāra. Had this influence penetrated hither direct from Swāt and the Kābul Valley, or had it asserted itself, with other forms of imported culture, from the side of Badakhshān and ancient Bactria? Whatever the channel, it seemed clear that the art influence thus transplanted had found a safe place wherein to maintain itself in these far-off valleys. Chitrāl wood-carving.

When proceeding on May 7 to the examination of remains reported near Jughōr, on the left bank of the river, I took occasion to visit at Dawāwish an old house declared to date back to the 'Kāfir-daur' or pre-Muhammadan period. Among the modern dwellings of the village, all ensconced under luxuriant groves of fruit-trees, the house, by its gloomy aspect and massive construction, would at once have attracted attention. Outside it looked at first like a large heap of stones. But closer inspection showed walls far more solid than usual in these parts, built of uncut but well-set slabs of stone. The most striking feature inside was a large central room or hall, showing elaborate carving on its massive pillars and along one wall decorative panelling in Old 'Kāfir' house at Dawāwish.

[2] See Fig. 14 in *Ruins of Desert Cathay*.

[3] Cf. for specimens of such motifs *Ancient Khotan*, ii. Pl. LXVIII, LXIX; also below, Pl. XVIII, XIX.

Deodar, all black with the smoke of ages. The ornamentation chiefly consisted of a diaper of four-petalled flowers, closely resembling in style those familiar to me from the ancient wood-carvings of the Niya Site and from Gandhāra relievos. The work was somewhat rough in execution, but much stronger in line and contrast than the floral design and tracery met with in the modern carvings of Chitrāl. The square pillars supported large corbels ending in elaborate volutes, and recalled those I subsequently found among the ruins of the Lop-nōr Site.[4] The volutes in particular were declared to be characteristic of 'old Kāfir' work. The opening in the centre of the roof (called *aiwān* or *kumāl* in Khōwār), which alone admits light and air, showed the typical construction. It consists of successive overlapping courses of massive beams gradually reducing the square opening, and will be found illustrated in the photograph secured of such an 'Aiwān' at Mīragrām.[5] It has its exact counterpart in the stone-constructed ceiling still intact in several Kashmīr temples, like that at Pandrēṭhan.[6] Owing to the dim light at the time prevailing in this ancient abode, no photograph could be taken. The owner of the house was a Mullah, practising also as a carpenter. The manifest pride with which he claimed the original 'Kāfir' builder of it a fellow craftsman, seemed to me like the conscious expression of an unbroken living tradition in this local art.

Remains of old forts.

Far less instructive were the remains found above Jughōr village, about one and a half miles below the bridge which spans the river opposite the modern fort. On the last offshoot of the spur which flanks the Jughōr-gul gorge on the north are the remains of ancient walls known as *Mochiān-deh*, 'the blacksmiths' village'. They appeared to have been constructed of large uncut stones which were now being quarried by the villagers, and to have formed an oblong of over forty yards in length and about seventeen yards across. There were traces left of dividing walls. I noticed no other remains on the surface of the narrow knoll and its slopes. But Waffadār Khān, the observant Dīwān-bēgī, who accompanied me, asserted that in his youth arrow-heads, beads, and small débris of superior pottery used to turn up here. The archaeological indications were equally vague at Uchust, a village situated about two miles to the south of the Agency on the hill-side above Lomārī. There, most of the houses were said to have been built with stones taken from walls going back to 'Kāfir' or 'Kalāsh' times. My visit to the place showed massive walls evidently of earlier date, now used as foundations of houses and as supports of terraces occupying the edge of a small plateau; but I was not able to discover any carved stones or other structural indications.

Importance of Chitrāl capital.

More interesting, actually, than these scanty remains were the rides which took me to visit them. They showed me how fertile and open the ground is for some miles above and below castle and Agency. One hamlet with its orchards and avenues almost touches the other, and all receive ample irrigation from a convergence of lively side-streams. The whole forms a closely cultivated and relatively large oasis such as the configuration of the main valley nowhere else allows space for. Hence Chitrāl must have been at all times, independent of political conditions, in economic respects the most important place of the Kāshkār State.

Route along Chitrāl River.

I had no time to visit the remains of two other 'forts of the Kāfir time' which were mentioned to me at Noghorghi, near Chumarkhon, and at Gankōrīnī, near Blach, both in the vicinity of Chitrāl and on the left and right bank of the river respectively. The loss was scarcely great, since at either site the ruins were described as consisting of mere walls of unhewn stones. But fortunately, opportunities for more interesting archaeological observations offered on the three marches which between May 9 and 11 took me up to Mastūj along the Upper Chitrāl River, or, as it is here called, the

[4] Cf. Fig. 99.

[5] See below, Fig. 16.

[6] Cf. Foucher, *L'Art du Gandhâra*, i. pp. 143 sqq., with Fig. 57.

Yārkhūn. This portion of the main valley is practically nothing but a succession of more or less formidable rock defiles, rarely broken by alluvial fans which alone offer room for cultivation. Yet in spite of the great natural difficulties which the route through this part of the valley presents, and which, as my personal narrative shows,[7] even the construction of the modern bridle-path has not entirely effaced, it must always have been an important line of communication; for it alone connects Chitrāl proper with the complex of fertile side-valleys to the north-east, which form Kāshkār-Bālā, and with the hill-tract of Mastūj on the headwaters of the Yārkhūn.

Inscribed rock of Pakhtōrīdīnī.

Evidence of the antiquity of the tracks which accompany the river-gorge on either side exists in two rock-carvings of unmistakably Buddhist character. The first was reached from the main route by crossing the river above the village of Moroi to the right bank, and marching along this to a point about three miles above the village of Prait. Here, almost exactly opposite to the small hamlet of Jomshili, the narrow track skirts a steep spur strewn with rock débris, at an elevation of about 150 feet above the river. At one point, known as *Pakhtōrīdīnī*,[8] a great boulder, apparently granite, immediately above the track, bears the carefully engraved representation of a Stūpa and below it an inscription of eleven Brāhmī characters (Fig. 5). Although the smooth water-worn surface of the boulder had suffered a good deal from weathering, the outlines of the Stūpa design could still be followed.

Rock-carving of Stūpa.

As seen from the reproduction of a drawing made to scale (Plate 2), they show a section of a Stūpa, conforming very closely to the architectural arrangements which I had observed in most of the extant Stūpa ruins of the regions of Kāshgar and Khotan.[9] There are the characteristic three bases successively receding, the traditional significance of which I have already discussed at some length in *Ancient Khotan*;[10] above them the high cylindrical drum; next, a projecting cornice surmounted by the proper Stūpa dome, which is approximately hemispherical in shape. Above the dome, in conventional outlines and drawn with a rather primitive attempt at perspective, appear the orthodox succession of 'umbrellas', apparently seven, the lowest resting on supports which seem to slant outwards from the top of the dome. Through the last three of the umbrellas is seen passing the central pillar which in reality carried the whole series of 'umbrellas', and which, according to an early tradition, symbolized the beggar's staff planted on the top of Buddha's own Stūpa model.

Features of Stūpa design.

After the admirably lucid exposition given by M. Foucher of the development of the type of Stūpa which he calls 'Transition',[11] the regular form of all such monuments so far discovered north of the Hindukush, and largely prevalent also in the valleys to its south, it is unnecessary to prove at length how accurately the design of the Pakhtōrīdīnī rock-carving agrees with it in all essential details. It will suffice here to call attention to particular features which might hereafter prove of interest in interpreting or restoring certain features of actual structures now in ruin. Starting from the foot we have the three receding square bases, the inception of which the tradition recorded by Hsüan-tsang about certain small Stūpas near Balkh, traced back direct to a model prescribed by Buddha himself.[12] It is important to observe this threefold arrangement of the base, both here and in the rock-carved Stūpa representation of Charrun described below; for possibly it is another indication of the infiltration of influence from across the Hindukush, and especially from the side of ancient Bactria, which I emphasized above in discussing the cultural and political history of Chitrāl.

[7] See *Desert Cathay*, i. pp. 41 sqq.

[8] Thus or *Pakhtūrīdīnī* I heard the name pronounced. In *Desert Cathay*, i. p. 42, 'Pakhturinidini' has been printed by mistake.

[9] Cf. the sections and plans of the Stūpas of Tōpa-Tim, Maurī-Tim, Niya Site, Endere, in *Ancient Khotan*, ii. Pl. XIX, XXII, XXIX, XXXVII.

[10] See *Ancient Khotan*, i. pp. 83 sq.

[11] See Foucher, *L'Art du Gandhâra*, i. pp. 64, 72 sqq.

[12] Cf. Watters, *Yuan Chwang*, i. p. 112; Beal, *Si-yu-ki*, i. pp. 47 sq.; *Ancient Khotan*, i. pp. 83 sq.; Julien's translation, *Mémoires*, i. p. 33, is less exact here.

It can scarcely be accidental that, whereas the introduction of square bases, in place of the single round one of the ancient Stūpa type, is illustrated by the majority of the Stūpa ruins now extant on the Indian North-West Frontier and in the Kābul Valley, yet the regularity of the triple number, so clearly prescribed by Hsüan-tsang's tradition, is in them conspicuously absent.[13] On the other hand, practically all the ruined Stūpas in Eastern Turkestān I have so far been able accurately to survey, show this threefold arrangement of base with striking regularity. The explanation seems obvious, that the tradition recorded by Hsüan-tsang applied specifically to a type of Stūpa construction which had developed in the Buddhism of ancient Bactria, and that this, with much else of art, culture, and religious literature, had found its way to the east of the Pāmīrs as well as into the Chitrāl Valleys.

Component parts of Stūpa design.

The successively diminishing height of the bases seen in the Pakhtōrīdīnī rock-carving was not an essential feature of the type, as is shown by a comparison of its pendant at Charrun (Plate 2). On the other hand, the narrow projecting frieze which separates the drum from the dome is repeated at Charrun, though merely in the form of a dividing line, and is clearly seen again in the Maurī-Tim Stūpa near Kāshgar.[14] That the height of the dome is in excess of the original hemispherical shape is a feature shared by all the Stūpa ruins I know in the Tārīm Basin, and common to the majority of those found on the Indian North-West Frontier. The design intervening between the top of the dome and the spire composed of successive umbrellas is too coarse to permit of a very definite interpretation. But it can scarcely be doubted that surfaces slanting outwards are intended. These may have been meant to represent either the faces of a gradually projecting pedestal, such as most Stūpa models show in a corresponding position,[15] or else figurative supports leaning outward, such as are seen below the bottom umbrella in the finely carved fragment of a miniature Stūpa in soapstone (Yo. 00121) I obtained from Yōtkan (Plate VI).

Stūpa spire with umbrellas.

Finally we have the 'clocheton d'ombrelles', as M. Foucher graphically calls it, surmounting the whole edifice. Quaint as its drawing is, this too represents points of interest. M. Foucher has justly insisted upon the important part which the crowning spire of umbrellas must have played in the architectural effect of all Stūpas.[16] It has survived on the North-west Frontier only in a few Stūpa models of small size, and in relievo representations. In these it always absorbs at least one-third of the whole height of the structure.[17] Now a reference to the carving shows that this proportion is there duly observed, the spire of umbrellas with its pedestal measuring 17 inches out of a total height of close on 50 inches. It is true that the number of the umbrellas or discs represented, which I take to be seven, exceeds the number of five which appears to be normal in the extant specimens of Gandhāra and the Kābul Valley. It is known, however, that this was by no means the limit; for the Chinese pilgrims attest for Kaniṣka's great Stūpa at Peshawar at least thirteen umbrellas, and the same number is still seen on the Stūpas of Nepāl and on a rock-carving near Drās.[18] And in order to give still further assurance on the point, both the small Stūpa models carved in wood which I discovered at the Lop-nōr Site (LB. II. 0033, 0034; Plate XXXII) show

[13] Thus among the numerous Stūpas, miniature Stūpas and relievo representations of Stūpas, which M. Foucher reproduces in illustration of chap. I of his *L'Art du Gandhâra*, dealing with the Stūpa, I can only find *one* model which may be assumed to show a Stūpa with three square bases (Fig. 72, i. p. 185), and even this is doubtful (see p. 182). Yet other numbers of square bases are met with in plenty, from a single one (e.g. Fig. 71) to five (Fig. 19).

[14] See *Ancient Khotan*, ii. Pl. I, XXII. It also appears in the wooden Stūpa models from the Lop-nōr Site, LB. II. 0033, 0034, reproduced in Pl. XXXII; and in that from the Niya Site, N. xvi. 001 (see below, chap. VI, sec. vi).

[15] Cf., e.g., Foucher, *L'Art du Gandhâra*, i. Figs. 20–3, 70, 71. This pedestal appears, however, in the Charrun carving (Plate 2) represented in a different and better recognizable fashion.

[16] See *L'Art du Gandhâra*, i. pp. 74 sqq.

[17] Cf. *ibidem*, p. 76.

[18] Cf. Foucher, *L'Art du Gandhâra*, i. pp. 77 sq.

the same number of seven umbrellas. Was this, too, like the triple square base, a regular feature in the Bactrian Stūpa type?

Inscription of Pakhtōrīdinī.

The inscription incised below the Stūpa carving, about 6 inches from the bottom edge of the boulder, is also of distinct interest. Though the incised characters have in places become very shallow through weathering, yet they can everywhere be clearly distinguished from natural fissures of the rock, as the photograph (Fig. 5) shows. Owing to the shallowness of the lettering and the rapid evaporation caused by the heat and wind, I did not succeed in my attempts to obtain a satisfactory paper impression. But the reading I made on the spot can easily be tested from my several photographs. The eleven Brāhmī characters vary in length from 1½ to 2 inches, and are spread out over a line nearly 3 feet long. Their forms show a close approach to the Western form of the Gupta type, as represented in its cursive variety in Bühler's palaeographic tables by specimens from Toramāṇa's inscription found in the Salt Range, which are approximately dated from the close of the fifth century A. D.[19]

Inscription interpreted.

The inscription is in Sanskrit, and according to my reading runs:

देवधर्मोयं राजजीवर्मण

This, assuming the loss of a Visarga at the end where the surface of the stone has suffered, may be interpreted as: *devadharmo 'yaṃ Rājajīvarmaṇaḥ*, 'This is an offering to the divinities from Rāja Jīvarman'. It is noteworthy that the name is found also as *Rājajīvarmaḥ* in the Charrun inscription. The explanation of it as a Prākrit form *Jīvarman* derived from *Jayavarman* presents no difficulty. As there is close epigraphic resemblance between the two inscriptions, it may be assumed that they name the identical person. Furthermore, the dedicatory character of the short inscription and the wording used indicate that this person was a Buddhist by faith. It is *a priori* probable that these pious rock-carvings were produced by order of a prince actually ruling in the valley or in a territory closely adjoining. His Indian name and title are therefore interesting evidence of the influence exercised in this region about the fifth century A. D. by Buddhist culture, with its accompanying Indian environment.

Local legend about inscription.

It is significant, in proof of the survival of ancient local worship, that this rock-carving is the object of a legend in which the reverence it still inspires is only thinly disguised to appease Muhammadan scruples. According to the story related to me by the Dīwān-bēgī, a man-eating demon or 'Deo' (Persian *dēw*), called 'Kalamdār', used at this spot to waylay and destroy people, until at last a 'big Mullah' caught him and laid him in fetters. The ropes used for binding the demon are supposed to be marked by the outlines of the Stūpa. With regard to the characters inscribed below, the popular belief is that they are of 'Chinese' origin. I was informed also that a similar rock-carving existed at Rayin in the Mūlkhō Valley.

The inscription of Pakhtōrīdinī has been destined to become in recent times the subject of a quasi-historical legend. General Cunningham, to whom Major Biddulph had sent what probably was a mere eye copy, erroneously read it '*Deva dharmaya Raja Jiva Pâla*—"The pious gift of Raja Jiva Pâla",' and the conclusion was promptly drawn that 'the name Jiva Pâla is, no doubt, the Jeipal of early Mahommedan writers', i. e. the name of the Hindu Shāhi Jaipāl who lost the Peshawar Valley to Mahmūd of Ghazni at the end of the tenth century A. D.[20] This case of 'mistaken identity' has since found due acceptance in the official account of Chitrāl.[21]

In my personal narrative I have described the ride on May 10 from Pakhtōrīdinī along the

[19] Cf. Bühler, *Indische Paläographie*, Table IV, col. viii.

[20] See Biddulph, *Hindoo Koosh*, p. 149.

[21] Cf. *Imperial Gazetteer of India*, New Ed., 1908, x. p. 301. 'It is recorded in a Sanskrit inscription carved on a rock near Barenis in Mastūj that about the year A. D. 900 the inhabitants of the surrounding country were Buddhists, and under the sway of Jaipāl, king of Kābul.'

precipitous right bank of the river to the debouchure of the Drāsan River, which unites all the streams from the valleys of Kāshkār-Bālā.[22] The village of Rēshun and the defile below Kurāgh which I passed on the opposite bank were, indeed, historical sites, but the tragic events which they witnessed during the Chitrāl expedition are still too recent for antiquarian investigation. At the village of Kusht, near the debouchure reached late in the evening, there was no time for inspecting the fort, which was stated to date from the time of the 'Ra'īs'. Nor did I hear at the time of the remains of a large 'Buddhist Chogten or Stūpa' which Major Biddulph mentions as existing 'in the Chitrāl Valley, on a conspicuous point near the road not far from the valley of Koosht . . . and still spoken of as "the idol".'[23]

Rock-carving at Charrun.

By crossing both the river of Drāsan and the Yārkhūn, a little above their confluence, to the village of Charrun I had entered Mastūj territory. Before, however, I proceed to discuss the brief historical notices of the district which survive, it will be convenient to describe the pendant of the Pakhtōrīdīnī rock-carving which I examined close to Charrun village. I had heard of it already at Chitrāl, and on the morning of May 11 was guided to the spot by Khān Sāhib Pīr Bakhsh, the worthy Indian Hospital Assistant who acts as adviser to the chief of Mastūj. In the midst of terraced fields, about a mile to the south-west of the village and at a point not far above the road descending the valley, a cultivator dwelling close by had, about eight years before my visit, come upon a large boulder of roundish shape bearing upon its north face the engraved representation of a Stūpa and a short inscription in Brāhmī characters on either side (Fig. 6). Induced apparently by some lingering recollection of earlier worship, the villagers, good Muhammadans as they are, had cleared the boulder completely and erected a rude hut over it for protection.

Representation of Stūpa.

The rock-carving, of which a drawing to scale is reproduced in Plate 2, shows a Stūpa measuring 3 feet 7 inches in height and 2 feet 6 inches across at the foot of the lowest base. Here, too, as at Pakhtōrīdīnī, appear all the characteristic features of the Stūpa type prevailing to the north of the Hindukush. There are the three successively receding bases, of which the topmost appears here also as the highest. Between it and the cylindrical drum bearing the dome, a strongly marked projecting cornice is inserted. For the latter I can find no parallel amongst the Stūpa ruins of the Tārīm Basin known to me; but it is present in the same position in the small Stūpa of Thōl, in Hunza,[24] and it must have been a frequent feature in the Stūpas of Gandhāra and Udyāna, to judge from its characteristic representation in several sculptured Stūpa models and in stuccoed Stūpa bases still extant.[25] To the cornice, marked by a simple line, which divides the drum from the dome, I have referred above.[26] The height of the dome is in excess of a true hemispherical shape much in the same proportion as the one of Pakhtōrīdīnī. Above the dome is seen the pedestal intended to support the crowning spire of umbrellas, in a shape which is commonly met with in Gandhāra Stūpa models.[27] From it rises the staff, but, curiously enough, the umbrellas or discs which it was meant to carry have been left unrepresented.

Inscription of Charrun carving.

The inscription engraved on either side of the Stūpa representation shows six well-cut Brāhmī *akṣaras* on the right, on the average 2½ inches high and incised to a depth of about one-eighth of an inch. On the left, owing to the peeling of the surface of the somewhat friable sandstone, only three *akṣaras* survive, and of these the first two are mere traces. There is no actual indication that more characters preceded these, but owing to the condition of the stone surface on that side, no certain conclusion can be drawn. On the right side, however, the inscription is manifestly intact, reading

[22] See *Desert Cathay*, i. 43 sq.
[23] Cf. *Hindoo Koosh*, p. 109.
[24] See *Ancient Khotan*, i. p. 20, Fig. 4.
[25] Cf., e.g. Foucher, *L'Art du Gandhâra*, i. Fig. 71, 72, and the remarkably well-preserved stuccoed Stūpa bases excavated at Takhti-i-Bāhī, Court T.XX, in 1911.
[26] See pp. 37–8.
[27] Cf. Foucher, *loc. cit.*, i. Figs. 22, 23, 70, 71.

रजजीवर्मः i. e. '*Raja Jīvarmaḥ*', the reference being doubtless to the same prince as in the Pakhtōrīdīnī inscription. Apart, however, from the question as to the original Sanskrit form of the name, probably *Jayavarman*, there remains doubt also as to whether *Jīvarmaḥ* is to be taken as a nominative sing. or as a mistake of the engraver for **Jīvarmaṇaḥ*, the correct genitive. Turning to the left side of the inscription only the *akṣara* क nearest to the Stūpa design can be considered as assured. The one preceding it suggested to me at the time of examination either a प or a म, two small horizontal top strokes being discernible, as well as a vertical stroke descending from the right-hand top stroke. The character on the extreme left can scarcely be read otherwise than as घु, though its beginning has been injured by the peeling of the surface. I am unable to interpret these three characters as a Sanskrit word or as part of one. But the queer Sanskrit of the rest, with its manifest misspellings, might well prepare us for some un-Indian form.

Whatever the right interpretation of the whole inscription may be, it is certainly dedicatory in character and is approximately contemporary with the Pakhtōrīdīnī inscription, the characters, though less cursive, showing the same palaeographic type.[28]

Survival of local worship.

The Charrun stone affords another striking example of local worship surviving the change of religion, and as such I have already mentioned it in a short paper dealing with such survivals north of the Hindukush.[29] The place where this Buddhist monument was found is known to the people by the name of *Mahajātu-guch*, 'the sacred corner'. Whether this name clung to the locality before the discovery of the boulder or has only been applied to it since, it is certain that the villagers, good Muhammadans as they have been for centuries, look upon the rock-carving with reverent awe and have their pious legend about it. A holy man, or 'Buzurg', of the old times is believed to have sat at that spot and then to have mysteriously disappeared, the boulder with its carving remaining to mark the sacred spot. The thinly disguised worship which the villagers now pay to this Buddhist relic, and to which the protecting hut bears witness, is all the more interesting because the configuration of the surrounding ground makes it evident that the boulder must have been completely buried by alluvial soil, probably for centuries. It lies on the edge of a small alluvial fan, where the accumulation of earth can only have been a gradual process. Yet I was assured that, until the neighbouring settler came upon it while preparing a new terrace for tillage, nothing was visible above ground. Had a tradition of sanctity lingered about the spot even during the long period of occultation, or has Muhammadanism so little affected the subconscious beliefs of the population that they are ever ready to reassert themselves at the old places of worship? However this may be, it is curious to observe that the reappearance of this object of local worship is indirectly due to the economic effects produced by the *pax Britannica* which has come to these remote valleys since 1895. Here, as elsewhere in Chitrāl and Mastūj, recent years have witnessed marked efforts to extend the area of cultivation along the foot of the barren and towering mountains, and there can be no doubt that these efforts are the natural result of the growing pressure of population produced by improved political and economic conditions. To this historically interesting fact I shall have to return anon.

Section III.—HISTORICAL ACCOUNTS OF MASTŪJ

Historical independence of Mastūj.

The mountain territory of Mastūj[1] which may be appropriately described as comprising the valleys drained by the Yārkhūn River above its confluence with the river of Drāsan, appears, as far

[28] See note 19 above.

[29] See my *Note on Buddhist local worship in Muhammadan Central Asia*, *J.R.A.S.*, 1910, p. 845.

[1] I use this form of the name which has found official acceptance, though the local pronunciation, as I heard it, seems to justify Raverty's preference for *Mastūch*, the spelling used by the careful native author of his 'surveys'; cf. *Notes on Afghānistān*, p. 161*.

as our scanty historical records allow us to judge, to have always figured as a chiefship allied to, yet distinct from, Chitrāl. It certainly has enjoyed this political separation under the Khushwakt family which, itself a branch of the dynasty established in Chitrāl since the seventeenth century, has intermittently either asserted its virtual independence from Chitrāl or even managed to extend its hold over it.[2] The extension of Khushwakt rule over Yasīn, and at times even Gilgit, which came to a close only in our own time, probably facilitated this independence by increasing the otherwise slender resources of Mastūj.

Geographical separation of Upper Yārkhūn Valley.

But just as the Khushwakt extension eastwards is accounted for by the comparatively easy line of communication connecting Mastūj and Yasīn across the Shandur Pass (only 12,250 feet above sea level), so the division which history shows between Chitrāl and Mastūj, the homogeneous character of the respective populations and rulers notwithstanding, finds its natural explanation in geographical features. The open and fertile portion of the Upper Yārkhūn Valley which extends from Mastūj to a point above Shuyist, a distance of some sixty miles, and the equally fertile though narrower side-valley of Lāspur descending from the Shandur Pass, are effectively separated from Chitrāl proper, and to a somewhat less extent, also, from the side-valleys which the river of Drāsan drains, by a succession of difficult gorges in the Yārkhūn Valley where strong defensive positions abound. It is probably only the predominance of a strong outside rule which could assure the permanent union of Chitrāl and Mastūj, and even now when there is such a suzerain power controlling all the Hindukush valleys, Mastūj enjoys independence under a separate chief though included with Chitrāl in the same Political Agency.

Mastūj noticed in T'ang Annals.

This rapid glance at the recent history of Mastūj has seemed to me necessary for a proper understanding of the only early notice of this territory which I have so far been able to trace. It is furnished by a passage of the T'ang Annals on which I have already commented in my *Ancient Khotan*.[3] A notice of the *T'ang shu* of which M. Chavannes has been the first to give a full and exact rendering, states that '*Chü-wei* 俱位 is also called *Shang-mi* 商彌; its capital is in the town of *A-shê-yü-shih-to*; it is situated amidst the great snowy mountains, north of the river of P'o-lü. This country is cold; it produces the five cereals, the vine and pomegranate. During the winter people live in caves. The inhabitants of this kingdom have always assisted the Little P'o-lü in spying out the "Middle Kingdom" (China).'[4]

Description of *Chü-wei* (*Shang-mi*).

By the river of P'o-lü can be meant only the river of Gilgit, the territory of which, along with Yasīn, bears in the Chinese Annals the designation of 'Little P'o-lü'.[5] A glance at the map shows that the territory of Chü-wei or Shang-mi, with its capital 'situated amidst the great snowy mountains' to the north of this river, corresponds exactly to the present Mastūj and the uppermost Yārkhūn Valley. The whole of this valley above Mastūj lies due north of the main feeder of the Gilgit River which, rising in the Shandur Lake, flows past Ghizar and Gūpis eastwards.

The description which the T'ang notice gives of the country as cold is correct; the latest account of Mastūj, too, notes: 'The climate in winter is severe, owing to the cold winds which

[2] For some account of the constant struggles between the Khushwakt and Katūr branches, cf. Biddulph, *Hindoo Koosh*, pp. 151 sqq. The main facts seem to be rightly summed up thus: 'Consanguinity did not prevent constant wars between the rulers of Chitrāl and Yasīn' (i. e. Mastūj which held Yasīn). . . . The Khush Wakté seem to have shown the greater warlike skill, but this advantage was balanced by the superior wealth and population of Chitrāl'; *ibid.*, p. 152. About 1790 the Khushwakt Khairullah appears as 'supreme Bādshāh', holding Chitrāl as well as Mastūj and Yasīn; cf. Raverty, *Notes on Afghānistān*, pp. 154, 158, 161; but subordinate 'Bādshāhs' are also named in different tracts. Amān-ul-mulk's supremacy over the whole region from Yasīn to Chitrāl, 1880–92, also proved short-lived; see *Imperial Gazetteer*, 1908, x. pp. 301 sq.

[3] See *Ancient Khotan*, i. p. 15, note 31.

[4] Cf. Chavannes, *Turcs occid.*, p. 129, note 2.

[5] Cf. *Ancient Khotan*, i. pp. 6 sq.; Chavannes, *Turcs occid.*, p. 150, note 1, with modification indicated in *Notes Addit.*, p. 43, note 1.

blow down the valleys.'[6] It is probably for the sake of shelter from these winds that the humbler habitations, as in the neighbouring Wakhān, are often built partially below ground, a fact which explains the reference of the Chinese notice to 'caves' inhabited during winter. Yet in spite of the elevation—close on 8,000 feet at Mastūj and over 10,000 feet near Shuyist—the main valley is very fertile and, as a competent observer notes, 'capable of supporting a large population'.[7] The lower portion of the main valley which lies between Mastūj proper and Charrun and is known by the name of *Khō*, enjoys a far more sheltered position, and the luxuriance of the orchards and arbours surrounding the villages from Būni to Sanōghar struck me greatly.[8] It is clearly to Khō, which counts as a part of Mastūj, that the Chinese mention of the vine and pomegranate must be referred.

The name *Chu-wei.*

For the identification of the capital *A-shê-yü-shih-to* I must refer below to my detailed account of the site above Shuyist where I have located its position.[9] Of the two alternative names which the Chinese notice records for the Yārkhūn Valley, one, *Chü-wei*, probably still survives in the modern *Khō*, the designation, as already stated, of that portion of the valley which lies below Mastūj. The way in which the term *Khō* appears in the names of various side-valleys of Kāshkār-Bālā, such as *Turī-khō*, *Mūl-khō*, *Lut-khō*, and the derivation from it of *Khōwār*, the name given to the Chitrālī language,[10] suggest that it had once a wider application. In any case, the use made of the two characters *Chü* and *wei* in other Chinese transcriptions would accord well with the assumption that they represent a phonetic rendering of the earlier local name of which *Khō* is the modern derivative.[11]

Chinese political interest in Mastūj.

The only historical reference which the T'ang Annals make to Chü-wei is significant of the importance which Chinese diplomacy in its struggle with Arab aggression attached even to the smaller mountain chiefships of the Hindukush region. The king of Chü-wei is mentioned with those of Udyāna and Ku-t'u, the modern Khotl north of the Oxus, as having been repeatedly approached by the Ta-shih or Arabs, during the K'ai-yüan period (A.D. 713–41), who wished to win them over to their cause.[12] They refused their allegiance, and in recognition the Emperor Hsüan-tsung in A.D. 720 sent envoys to invest the chief of Chü-wei as well as the other two rulers with the title of king.[13] It is clear that at that time Mastūj must have had its own ruler distinct from Chieh-shih or Chitrāl which appears thirty years later supporting the Tibetan allies of the Arabs.[14]

Hsüan-tsang's description of Shang-mi.

Wu-k'ung's passage down the Upper Yārkhūn Valley in A.D. 751 or 752 on his way to Udyāna has been discussed so fully above that its mere mention will suffice here.[15] But the notice of this region left by Hsüan-tsang calls for detailed examination. His 'Memoirs' tell us that 'after passing through the kingdom of Ta-mo-hsi-t'ieh-ti', or Wakhān, 'one passes to the south of a great mountain and arrives in the kingdom of Shang-mi 商彌'.[16] This is described as measuring from 2,500 to 2,600 li in circumference. 'It is cut up by mountains and valleys, containing hillocks of

[6] See *Imperial Gazetteer*, 1908, xvii. p. 214.
[7] See Biddulph, *Hindoo Koosh*, p. 59.
[8] Cf. *Desert Cathay*, i. p. 45.
[9] See below, pp. 50 sqq.
[10] Cf. Biddulph, *Hindoo Koosh*, pp. 59, 62. It deserves to be noted that Mughul Bēg gives to the valleys of Turī-khō and Mūl-khō the designations of 'Upper and Lower Kuhob', *Kuhob* being manifestly a Persianized reproduction of *Khō* or **Khov*; see *Notes on Afghānistān*, p. 160. The identity of Chü-wei with *Kobi*, Elphinstone's form for *Khō*, was first suggested by Yule, *J.R.A.S.*, N. S., vi. p. 114.
[11] Cf. Julien, *Méthode pour déchiffrer*, pp. 130, 224.
[12] See Chavannes, *Turcs occid.*, pp. 129, 292; also above, p. 20.
[13] The exact date of this event which coincided with the Chinese support extended to a number of territories affected by the Arab danger, from Kashmīr to Samarkand, is indicated by another historical work, the *Tzŭ chih t'ung chien*; cf. Chavannes, *Turcs occid.*, p. 129, note 2; pp. 292 sq.
[14] See above, pp. 29 sq.
[15] Cf. above, p. 18.
[16] Cf. Julien, *Mémoires*, ii. pp. 206 sq., with which Watters, *Yuan Chwang*, ii. 282, agrees in substance.

different heights. All kinds of crops are grown, pulse and wheat being particularly plentiful; of grapes there is abundance. This country yields laminary orpiment which is obtained by digging with the pick in the hill-side and breaking up the rocks where it is embedded. The spirits of the mountains are wicked and cruel, often causing great mischief. A man does not pass there without first offering a sacrifice; then he may go and return in safety. But if he does not address prayers to them storm and hail assail him. The climate is cold; the manners of the people are lively and impetuous, their nature upright. Their customs are not regulated by ceremony; they are narrow in their views and only moderately industrious. The writing is the same as that of the Tu-ho-lo (Tukhāra) country; but the spoken language differs. The people mostly wear woollen garments. The king is of the Śākya race. He respects and venerates the law of Buddha; his subjects follow his example and are all animated by sincere faith. There are two convents containing a small number of monks.'

Identification of Hsüan-tsang's *Shang-mi*.

Both Cunningham and Vivien de Saint-Martin had expressed the view that in this passage Hsüan-tsang was describing Chitrāl which, as seen both from the wording of the *Hsi-yü-chi* and the *Life*, he did not personally visit.[17] Their suggestion received the support of Sir Henry Yule who pointed out that the yellow arsenic or orpiment mentioned by Hsüan-tsang is still a characteristic product of Chitrāl.[18] The fact that Shang-mi, with the alternative name of Chü-wei, is mentioned also in the brief notice of the T'ang Annals discussed above had not escaped the attention of Sir Henry Yule; but with only an inadequate abstract of the notice before him,[19] it was impossible even for that great pioneer of the historical geography of Central Asia to perceive that the name Shang-mi had in reality a more restricted application.

Hsüan-tsang's description of *Shang-mi*.

That the information heard and recorded by Hsüan-tsang must in the first place have related to the Upper Yārkhūn Valley or Mastūj is evident from the fact that he mentions the route leading to it only after having traversed the whole of Wakhān from west to east, and immediately before beginning his description of the Pāmīrs (Po-mi-lo). Thus it is certain that the route leading south from the Sarhad across the Barōghil to the Yārkhūn headwaters is intended. The description of Shang-mi as a cold region, the relatively small area indicated, and the mention of only two convents among a population wholly Buddhist are all indications which point to a mountain territory of limited extent and resources such as the present Mastūj.[20] On the other hand it must be acknowledged that the reference to laminary orpiment, which is still obtained in Chitrāl much in the fashion described by the pilgrim, suggests the possibility that Hsüan-tsang was led by his informants to comprise under the same designation other portions of Kāshkār-Bālā or possibly the whole of Chitrāl. The vague and incorrect fashion in which the term Chitrāl is nowadays often extended by strangers to Mastūj, though the latter is an independent chiefship and always kept distinct in local knowledge, would supply an exact parallel. It must further be remembered that at the date of Hsüan-tsang's journey both Mastūj and Chitrāl may well have acknowledged for the

[17] Cf. Cunningham in *J.A.S.B.*, xiv. p. 433; V. de Saint-Martin, *Mémoire analyt.*, p. 426.

[18] See his *Notes on Tokhāristān*, *J.R.A.S.*, N. S., vi. p. 114.

[19] Taken from Ritter, *Asien*, vii. p. 582.

[20] The estimates of circumference so frequently given by Hsüan-tsang must necessarily be very vague. But in this case the corresponding measurements given for neighbouring mountain tracts may provide a gauge. Thus the small mountain territories of Shighnān (*Shih-k'i-ni*) and Kurān (*Ku-lang-na*) at the headwaters of the Kokcha, are both given a circuit of over 2,000 li. Thus Ta-mo-hsi-t'ieh-ti or Wakhān, which consists of a valley scarcely much longer than the Yārkhūn Valley and probably more limited in its arable land and population, is given a length of 1,500–1,600 li; cf. Watters, *Yuan Chwang*, ii. pp. 278 sqq.

It may also be noted that Wakhān, though rightly described as less productive and with a far more severe climate, is stated to possess more than ten Buddhist monasteries, as against the two of Shang-mi. The number for Shang-mi might well surprise us in a population so devoted to Buddhism, if this district were taken to include the whole of the relatively fertile and populous Chitrāl.

time being one chief ruler as they have done more than once at intervals during the modern period of their history.[21] This might easily have induced the pilgrim, who never saw the territory himself, either to use the name Shang-mi in an extended sense or else to introduce into his notice the mention of a product belonging to the neighbouring chiefship. In all other respects his account appears appropriate to Mastūj or Kāshkār-Bālā, and his distinct mention of the predominance of Buddhism supplies a point of interest.

Position of *Shuang-mi* of Han Annals.

A far more ancient mention of this district would exist if only Shang-mi could be definitely identified with the *Shuang-mi* 雙靡, which the Annals of the Earlier and Han dynasties name as one of the five territories held by Yüeh-chih chiefs (*hsi-hou*) dependent upon Tokhāristān.[22] But the Han Annals do not furnish any definite indication as to the position of Shuang-mi, and the *Pei shih* which supplements these notices by information dating from the beginning of the seventh century A.D. contents itself with giving *Chê-hsieh-mo-sun* 折薛莫孫 as the later equivalent of the name Shuang-mi and placing the territory to the west of Ch'ieh-pei which corresponds to Hsiu-mi or Wakhān.[23] This location, however, can certainly not be reconciled with the position of Mastūj, nor yet with that of Chitrāl, to the south of Wakhān. As, moreover, we have no means of identifying the *hsi-hou* territory of Kuei-shuang, with its capital Hu-tsao, which the Han Annals mention after Hsiu-mi and Shuang-mi and which the *Pei shih* places to the west of the latter,[24] the question as to the position of Shuang-mi must, I think, at present be left open. However, that the power of the Yüeh-chih, established for centuries in Badakhshān, should have made itself felt also in Mastūj and Chitrāl is in itself highly probable, especially in view of the historical analogies which reach down to quite recent times.[25]

Section IV.—OLD SITES IN MASTŪJ

Already the march of the first day, May 11, which I passed on the soil of Mastūj, showed that the Upper Yārkhūn Valley, notwithstanding its confined area and limited resources, was not without remains of the past. In the pretty villages of Awi, Mēm, Mīragrām, through which the road led me about half-way, I had to be content, it is true, with such proofs of an old-established civilization as were afforded by luxuriant orchards and noble Chinār groves,—sights doubly impressive in view of the background of mighty glaciers which overhang the side-valleys and feed their life-giving rivulets. But when some four miles further up I reached the large village of Sanōghar, ensconced among magnificent Chinārs and fruit-trees, I found my attention claimed not merely by the training-camp of that fine corps of cragsmen, the Chitrāl Scouts, but also by a veritable 'old site'.

Ancient fort of Sanōghar.

The narrow rugged ridge which rises in complete isolation between the village and the steep-banked river to a height of about 200 feet above the nearest fields, and forms a position of great natural strength, was pointed out to me as the site of *Sanōgharo-noghor*, the ancient fort of Sanōghar. There was nothing to be seen on its level summit, some 350 feet by 50 feet or so across, save old tombs and much rubble which probably marked walls completely decayed. But the slopes all round were thickly covered with red pottery débris of remarkable hardness, far superior to any earthenware

[21] See above, pp. 33, 42.

[22] This identification was first proposed by Cunningham, *J.A.S.B.*, xiv. 433. Yule, *J.R.A.S.*, N.S., vi. p. 114, is content to quote it without expressing an opinion. It is accepted by Professor Marquart, *Ērānšahr*, p. 243.

[23] For a lucid and complete synopsis of the notices concerning the *hsi-hou* territories attached to the Yüeh-chih dominion in Tokhāristān which the *Ch'ien Han shu* and *Hou Han shu* furnish, see Chavannes, *Pays d'Occident*, p. 43 (*T'oung-pao*, 1907, p. 189), note 3.

As regards the identity of *Ch'ieh-pei-Hsiu-mi* with Wakhān, see below, p. 60.

[24] For the vagueness of the conjectural locations so far attempted, see Marquart, *Ērānšahr*, pp. 245 sq.

[25] Cf. above, pp. 28 sqq., and p. 33.

now known in these valleys. The impression gained from these scanty remains and from local traditions of occasional finds of bronze arrow-heads and strange fragments of weapons, distinctly suggested an early occupation. The site was invested with additional interest by the full view it commanded of the Nisar-gol plateau opposite, where in 1895 Colonel Kelly's successful action was fought and the relief of Chitrāl Fort decided.

After we had crossed the gloomy river gorge to the right bank, about one mile above Sanōghar, I was shown, at the eastern end of the barren Maidān of Parwak, a small ruin known as *Darbatshālī-noghōr* and believed to be of great antiquity. Tradition seemed to connect it with a 'Buzurg' who was famed for his stinginess. The traceable remains consisted of an oblong of ruined walls of solid though rough construction, measuring about seventeen by twenty-one yards, with the exposed masonry rising eight to ten feet above the ground level. Some portion of the stone material had been utilized for the construction of 'Sangars', probably when the Nisar-gol position was defended by the Chitrālīs and their Pathān allies. Outside, the lines of a quadrangular outer enclosure were just traceable in places. The whole, situated in a barren spot far removed from cultivation, suggested the remains of a monastery. But there was no time for closer investigation before the falling dusk obliged me to move on to Mastūj.

'Capital' of Mastūj.

My single day's stay at one of the hamlets which make up the present Mastūj capital did not reveal anything of antiquarian interest, unless I may thus allude to that fine old chief, Bahādur Khān, who for his loyalty in 1895 had secured independence as ruler of the Yārkhūn Valley.[1] Full of vigour in spite of his eighty years, and full of old-world courtesy in his ways, this ruler of some six thousand households seemed to embody in his person an historical past which is now rapidly fading away. The position occupied by this cluster of hamlets at the point where the Yārkhūn receives from the south its first main tributary, the river of Lāspur, and where the routes from Wakhān, Chitrāl, and Gilgit meet, must always have been of importance for trade as well as for warfare and amply accounts for the simple square-towered castle which serves as the chief's usual residence (Fig. 13). But at the same time a glance at the bare stony plateau over which these hamlets are scattered, sufficed to show me that there was here neither enough arable land nor adequate irrigation facilities to have supported any large settlement within historical times. This negative observation had its value when I came to trace the position of what was the chief place of the Upper Yārkhūn Valley at an early period.

Old fort of Brep.

On my march up the valley on May 13 I was able to examine in some detail the old fort of Brep of which I had heard already at Chitrāl from Waffadār Khān, Dīwān-bēgī, as dating back to the 'Kalmak' or Chinese period. In the midst of the little hamlets collectively known as Brep, which are scattered over the alluvial fan formed by the Chikano-gol, some fourteen miles above Mastūj, there rises a conspicuous mound locally known as *Noghōro-dōk*, 'the fort mound'. Its artificial origin is clearly indicated by the slopes which, wherever scored by small ravines, show the same mixture of clayey earth and pebbles as found in the walls which crown the top. The summit rises to a height of about thirty-four feet above the ground level on the east, where the slope shows an angle of about 41°. On the west, where the ground falls gently away towards the river, the elevation is somewhat greater. The circumvallation on the top forms an irregular oblong of which the east and west faces measure 180 and 183 feet respectively. The two shorter sides face to the north-east and south-west, having a length of about 103 and 133 feet respectively. The walls appear to have been constructed of a base or plinth of large uncut slabs, with masonry of sun-dried bricks superimposed. On the east face the masonry of the wall still showed a clear height of nine feet whereas elsewhere it was badly broken or embedded in débris. Of the base some three feet

[1] See *Desert Cathay*, i. p. 46, Fig. 18.

were exposed on the east face and about six on the west face. The thickness of the walls, owing to the accumulation of débris, could not be ascertained without excavation. The bricks which composed them were relatively large, measuring on the average eighteen by ten inches with a thickness of three and a half to four inches. They invariably contained a considerable admixture of pebbles, small stones, and fragments of hard pottery. Loopholes, three to four inches square, were traceable on the east face at irregular intervals.

Structural remains of Noghōro-dōk.

The top of the mound is not quite flat and is everywhere covered with crumbling walls of houses or interior structures, so that no regular plan or outline is now traceable on the surface. The best preserved ruin was found near the centre. It consisted of a wall built of sun-dried bricks and showing a thickness of two feet eight inches over a length of eighteen feet. It still rose some eight feet above the plinth of rough stones. The bricks, measuring on the average fourteen by twelve inches with a thickness of four inches, showed clay mixed with sheep-dung, a method of brick-making no longer practised at the present day. It seemed unlikely that the extant walls were all remains of contemporaneous structures; some built only of rough stones and others of rubble set in mud bore a manifestly later look. The centre of the small plateau is occupied by a hollow the bottom of which is some ten to twelve feet below the foot of the brick wall already mentioned. This probably is the result of excavations such as I found in progress at other points of the mound. The villagers use the earth here obtained for plastering the walls of their huts, as it is said to be harder than the clay ordinarily obtainable. It may be assumed that the material would be useful also for manuring; but I did not ascertain that it was actually used for this purpose.

The only structural features of old date still distinguishable, apart from the enclosing walls of the fort, are a small square bastion near the middle of the east face and a round tower, at the south-west corner of which the brick foundations sloping inwards measure twenty-seven feet in their extant circumference. The entrance to the fort appears to have been near the southern end of the east face, where I thought I could trace remains of the wall of an outer gate. The regular courses of rough stone slabs which form the base of the old circumvallation make it easy to distinguish this from the more recent rubble-built walls of which several appear on the west and south slopes supporting terraces intended for graves. Potsherds are found in great quantity both among the ruins on the top of the mound and covering its slopes. Their colour is generally bright red on the surface, which is moderately glazed, and a dull grey or brown within. The villagers declared that beads and arrow-heads in metal were discovered at times, but would not acknowledge other finds.

The early occupation of the mound is made clear by the height of the artificial deposits which cover it or possibly compose it entirely. Local tradition vaguely ascribes the circumvallation to the time of the 'Kalmak' or Chinese domination. Judging from the great size of the bricks, which recalled those seen in ruined Buddhist structures near Kāshgar, as also from their peculiar make and the hardness of the potsherds admixed, the fort might well go back to some occupation from the Wakhān side earlier than that of the middle of the eighteenth century. Of datable relics there was no trace. But there is little hope of discovering these in valleys where until recently the current use of coined money was unknown, and where objects capable of artistic ornamentation, whether of metal or other hard materials, must have been few.

Obaidullah's house at Mīragrām.

I was all the more gratified by the opportunity which that night's halt at the hamlet of Mīragrām offered for observing how artistic traditions of unmistakable antiquity have retained their hold on local crafts down to the present day. I had pitched my camp in a pretty orchard between the river bank and the house belonging to Obaidullah Khān, the Deputy-Hākim of the uppermost Yārkhūn Valley. The house from outside had looked a modest rubble-built hovel. But when, attracted by some carved pillars and quaint wall-painting in a veranda-like structure, I paid it a visit

next morning it proved quite a little museum of local architectural ornament and household art. In the verandas, to start with, there were gracefully designed wooden pillars decorated with carvings which to my eye appeared strangely familiar from their resemblance both to Gandhāra art and its reflex in the wood-carvings of ancient Khotan sites (Fig. 15). On the four sides of their capitals there was displayed in relievo an ornament clearly derived from the classical acanthus, a design which I later encountered as far as Lop-nōr.[2] The abacus above showed that elaborately carved open lotus which is common in Gandhāra decoration and traceable also far away eastwards.[3] The band inserted between capital and abacus was decorated either with a leaf-ornament recalling a half-open lotus or with a fret design which has its counterpart in ancient Turkestān wood-carvings. In the carved diaper covering the four sides of the pillars I could easily recognize a somewhat florid development of that peculiar four-petalled flower which the wood-carvings excavated at the ancient sites of Niya and Domoko[4] prove to have been a favourite decorative motif in Buddhist Khotan art from the third century onwards. It was used to fill oblong spaces, and was certainly derived from the Graeco-Buddhist style of Gandhāra.

Reminiscences of Gandhāra motifs.

Equally striking were the reminiscences of that style and of its early Central-Asian reproduction in the bands of fresco decoration in terra-cotta, black, and white which adorned the upper portion of the veranda walls. Here the constantly recurring motifs of the lotus fully open or in bud, of the 'Chakra', and of the four-petalled clematis-like flower with or without square frame, looked as if they were derived from that frescoed wall in the hall of the ancient dwelling N. III which I remembered so well from my first excavations at the Niya Site.[5] All these motifs, down to the halved flowers with four petals used to fill corners, had their exact counterparts in the decorative elements of Graeco-Buddhist relievos from Gandhāra. The reappearance of these antique designs was none the less startling because the execution was coarse and manifestly recent. In fact, Obaidullah Khān told me that this pictorial decoration had been done only three or four years before my visit, while the carved pillars of the verandas he remembered to have been set up some twenty years earlier.

Interior architecture of house.

But far more interesting still proved the interior of Obaidullah Khān's house, said to have been built some sixty years before. It contained among other accommodation two fine rooms provided with Aiwāns or skylights (called *kumāl* in Khōwār), and excellent carving on pillars and panelling. Of one of these which served as *baipash* or 'state room' I was able to take a photograph (Fig. 16) and a plan (Plate 1). Its architectural arrangement alone, as shown by the plan, would have sufficed to rivet my attention; for while its ceiling, with successive courses of massive beams enclosing a series of gradually narrowing squares, reproduces exactly the system of roofing which is known to us in stone from ancient shrines of an area extending from Kashmīr to Bāmiān,[6] this room in its ground-plan accurately illustrates what the halls of the ancient residences excavated at the Niya Site must once have looked like. There were raised sitting platforms on either side of the gallery into which the main entrance opened; a narrower platform under wooden arches opposite to this gallery; and in the centre the open fire-place under the skylight just as the ancient halls at the Niya Site showed it often.[7]

Decorative wood-carving.

The decorative details of the wood-carving seemed directly derived from equally antique models. That on the pillars and pilasters showed diapers in which the four-petalled flower, conventionally

[2] Cf. the carvings LB. 0014 in Pl. XXXII; M. v. 001 in Pl. XXXIV.

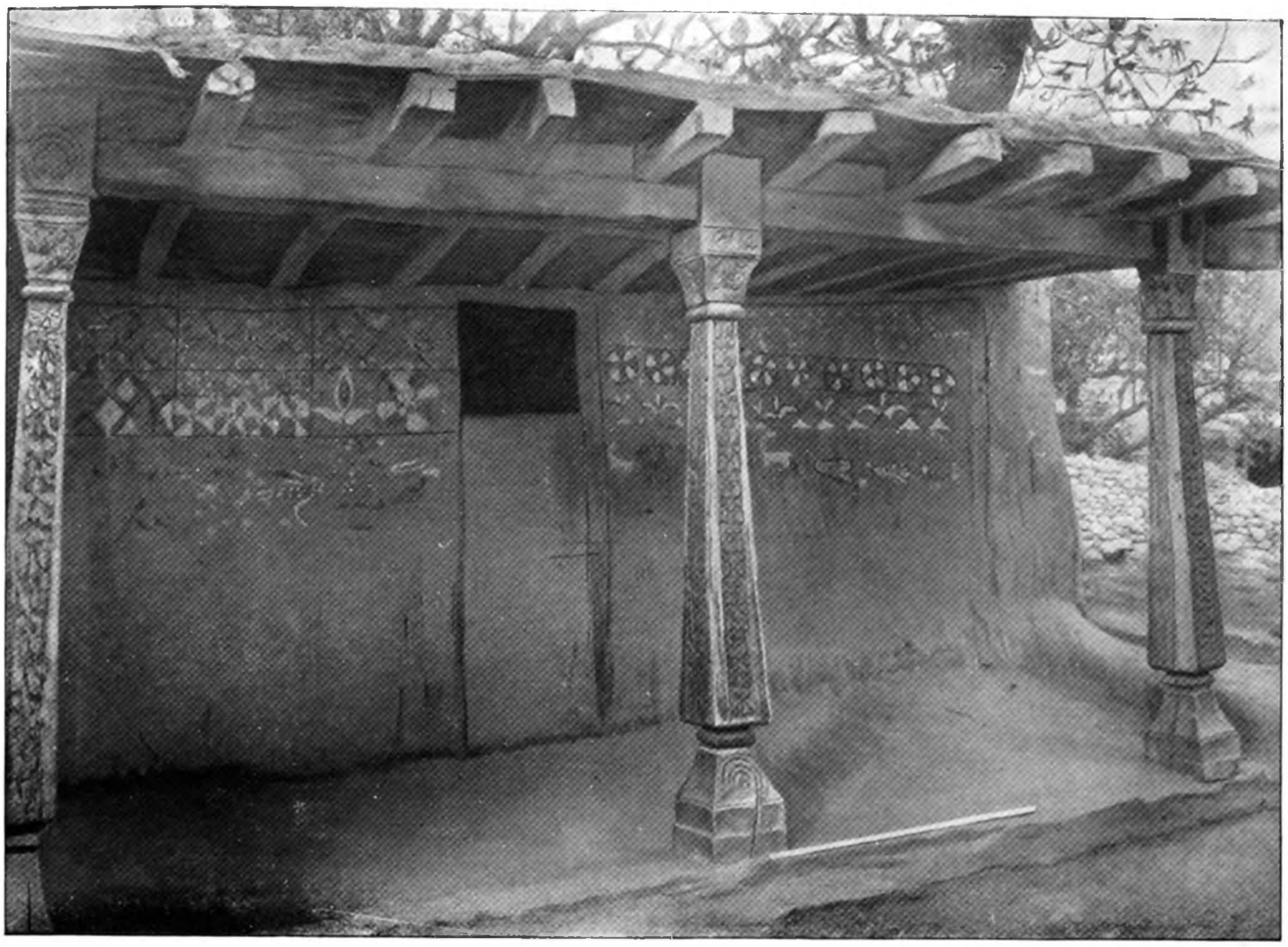
[3] See LB. II. 0014 in Pl. XXXII; M. v. 0012 in Pl. XLVII, &c.

[4] Cf. e. g. N. XII. i. 2; XXVI. iii. 1 in Pl. XVIII; LB. II. 0016, 0017 in Pl. XXXI; N. XIII. v. 1 in Pl. XIX; F. II. ii. 01 in Pl. XVII, &c.; also N. vii. 4 in *Ancient Khotan*, Pl. LXVIII; i. p. 334.

[5] Cf. *Ancient Khotan*, i. p. 333.

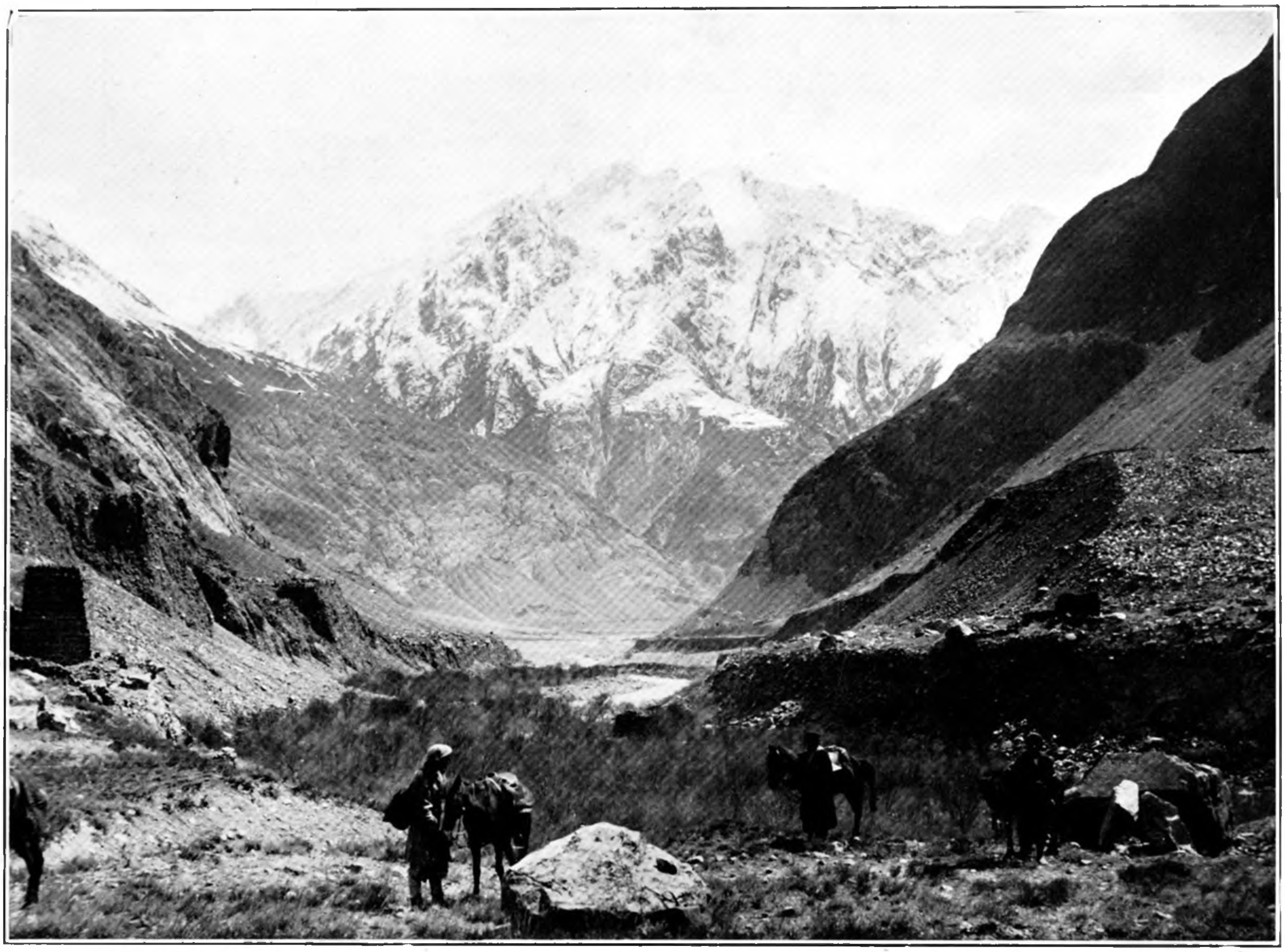
[6] Cf. Foucher, *L'Art du Gandhâra*, i. p. 143.

[7] Cf. *Ancient Khotan*, Pl. XXVIII, XXX, XXXIII; and below, Pl. 8 (N. XII), 10 (N. XV), 14 (N. XXIV), 15 (N. XXVI).

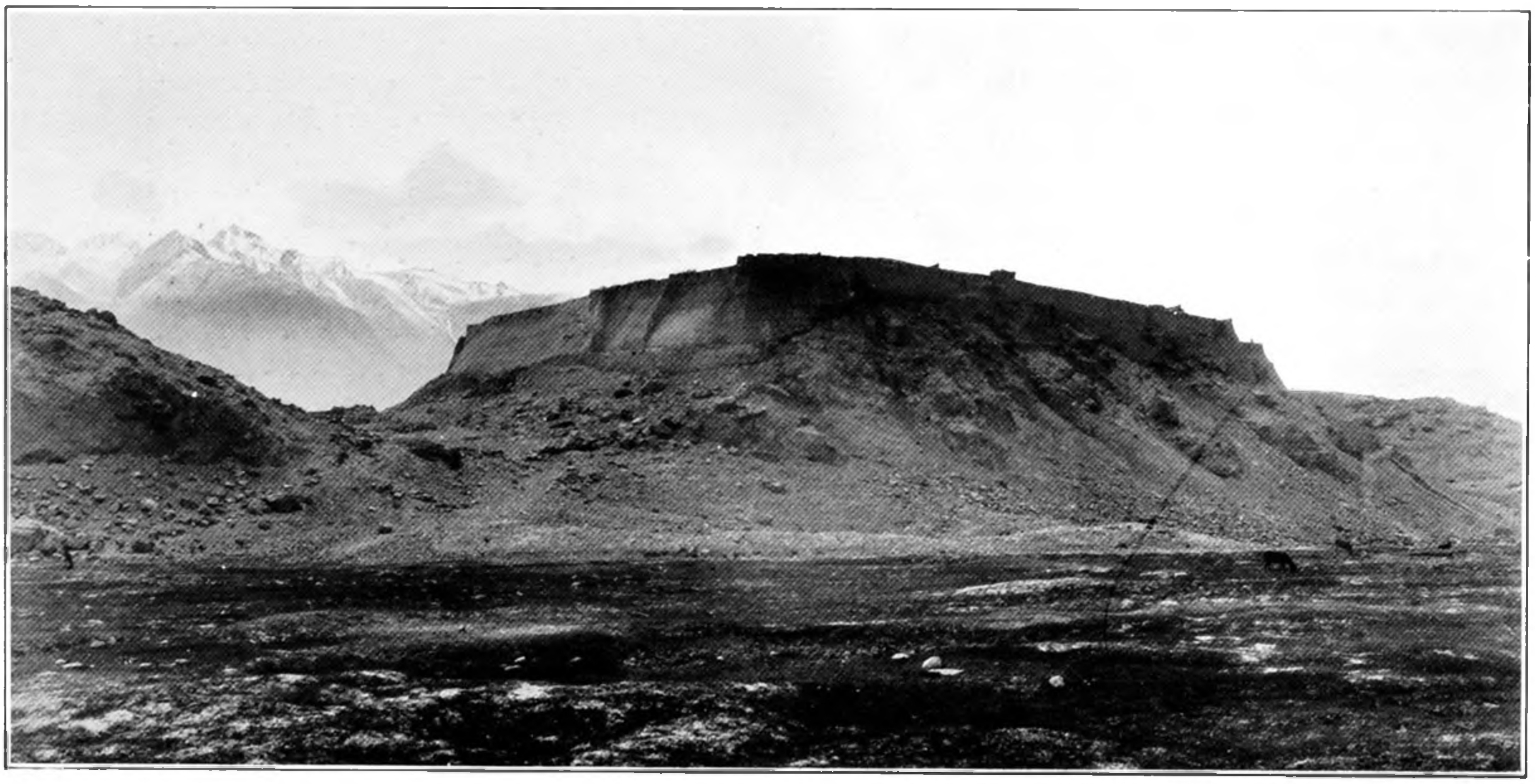


15. VERANDAH OF OBAIDULLAH KHAN'S HOUSE, MĪRAGRĀM, MASTŪJ.

16. STATEROOM IN OBAIDULLAH KHAN'S HOUSE, MĪRAGRĀM.



17. DEFILE OF 'DARBAND', WITH VIEW DOWN TOWARDS JHOPU.
To left valley leading to Tui Pass.



18. CHINESE FORT OF TASH-KURGHAN, SEEN FROM SOUTH-EAST.
(See p. 76.)

treated within square or circular frames,[8] played the chief part. In the decoration of the abacus above the pillars of the architraves and corbels, the familiar open lotus prevailed. The two 'Mihrābs' or niches occupying the centre of the spaces between the three pilasters of the west wall, were flanked by side panels which distinctly recalled the slanting door-jambs familiar to Gandhāra architecture no less than to the wood construction of the Niya Site dwellings.[9] The triangular and undulating frets decorating these side panels can easily be traced also in the remains of ornamental wood-carving from ancient Turkestān sites.[10] Even more ancient, perhaps, is the Stūpa-shaped fret which appears, both in convex and concave form, on the panels forming the lintels; it is common both in early Indian and in Graeco-Buddhist architectural ornament and traceable also in Turkestān.[11]

Designs on furniture.

Quite as rich and old in design was the carving on articles of furniture, no doubt of local manufacture, such as trunks, cupboards, boxes. But in the absence of illustrations, which I had no time to secure, a detailed description would be useless. There was a gratifying display, too, of graceful Aptābas, Chaugāns, Chilapchis or ewers in metal. But by their forms and work I could clearly recognize them as imports from Western Turkestān or from Khotan, so that they were of interest only as evidence of continued trade connexion. The same applies probably also to much of the silversmith's work which I was allowed to admire among the treasures, such as ear-rings, necklaces, amulets, brought forth from the ladies' brass-bound safe. But even among these I came upon articles of rougher make but curiously old design, which clearly were of local manufacture. Fortunately there could be no doubt on this score in regard to the Chitrāl rugs which covered the sitting platforms, &c., and of which some are visible in the photograph, Fig. 16. Though all of modern make, as shown, alas, by the crude aniline dyes used for their colouring, they abounded in simple geometrical patterns of manifestly ancient origin. Thus I noticed the particular frequency of the Svastika, the cross, a Stūpa-border, and a duplicated Greek fret, most of which can be made out in the photograph. Widely spread as these patterns are in the art of different regions, it is yet of interest to observe that all of them can actually be found also in the fragments of ancient rugs which were brought to light by my excavations from Khotan to Lop-nōr.[12]

The *Darband* of Mastūj.

I felt doubly grateful for the glimpse which this interesting house afforded of the old art traditions surviving in these Hindukush valleys; for the succeeding long march from Mīragrām to Shuyist showed only too plainly the increasing harshness of the climatic conditions with which civilization has to contend higher up in the Yārkhūn Valley. At the small hamlets of Jhōpu which were reached after passing long barren slopes of rock or detritus, and where the route to Yasīn across the Tui Pass diverges, I saw the last fruit-trees of the valley, still in wintry bareness. Beyond the valley narrows to the gloomy defile appropriately known as 'Darband' (Fig. 17), flanked on either side by unscalable spurs of great height, and here I was able to examine the decaying watch-towers which on either side of the river guard this natural gate of Mastūj.[13] A position of such manifest defensive strength must always, down to quite recent times, have claimed importance in the invasions threatening from the Wakhān side. But there was no record or tradition to tell me of the fights which this 'Klause' is likely to have witnessed in the past. Already before reaching Warsam, a hamlet of Jhōpu, I had noticed traces of old cultivation on a large alluvial fan now abandoned to desolate waste of detritus. Once beyond Darband I was struck by the stretches of riverine flat or

[8] Circular frames enclosing the same flower pattern were frequently observed by me also in modern Khotan wood-carvings. Their origin is traceable also in ancient carvings, though there in connexion with other floral patterns; cf. Pl. XVIII, XIX, XXXI. For square frames see Pl. XLVII.

[9] Cf. Foucher, *L'Art du Gandhâra*, p. 108; Figs. 31, 32; below, Fig. 56.

[10] See Pl. XVII.

[11] Cf. e. g. Foucher, *L'Art du Gandhâra*, i. Fig. 98; below, Mi. xi. 00126, Mi. xii. 0028 in Pl. CXXXVII.

[12] Cf. below, Pl. XLIX, CXX; *Ancient Khotan*, i. pp. xxiv, 397 sqq.; ii. Pl. LXXV.

[13] See *Desert Cathay*, i. p. 49.

easily sloping hill, across which the road led, all manifestly capable of cultivation and in part covered by luxuriant scrub and jungle. Yet only at two points did I come upon small plots of tilled land.

Cultivation at Shuyist.

I was thus fully prepared to find Shuyist, the last village of Yārkhūn, a place devoid of resources. This expectation was not belied by the few terraced fields and low stone huts I could see from where my camp was pitched by the scrub-covered river bank, opposite to the debouchure of the narrow side-valley descending from the Rich Pass which leads to Turīkhō. All the greater was my surprise at the ample supply of animals and men which I found assembled here through the forethought of Khān Sāhib Pīr Bakhsh to help my baggage onwards over the remaining marches to Wakhān. The ease with which they had been collected explained itself only next morning when, after saying farewell to that capable representative of British authority in Mastūj, I had started on the march up the valley. At first the track, quite easy throughout, led along the edge of terraces rising high above the river. Here I passed the massive watch-tower known as Tōpkhāna-i-Ziā-bēg and said to have been erected about a hundred years ago to guard against Wakhī irruptions. On terraced ground higher up I noticed the isolated holdings of Chitisar and Imkip still counted with Shuyist. But after about three miles the ground began to show a strikingly different aspect. Instead of narrow strips of boulder-strewn ground or shingle slopes, such as the previous marches from Chitrāl had taken me past in depressing monotony and with rare interruptions, I found myself crossing a succession of broad alluvial plateaus sloping gently down to the river. Very soon this open 'Maidān', as my local followers called it, widened to fully a mile or so. Arable land there was here in abundance, with plentiful water, too, supplied for irrigation by the Shusaro-gol and other side-streams which the eternal snows of the main Hindukush chain feed.

New colonies above Shuyist.

Nor had this chance for colonization been neglected. For a distance of nearly four miles by the path, signs of new cultivation met the eye everywhere, jungle clearings, scattered homesteads, and fields as yet unenclosed. It is true these 'new lands' were not yet continuous, and stretches abounded of good soil left to lie as scrub-covered waste. But then the colonists, who had settled here since this reclamation was started some seventeen years before my passage, numbered as yet only some thirty families. Most of them came from Sanōghar, Turīkhō, and other parts of Kāshkār-Bālā where pressure of population is now making itself felt, a few also across from Wakhān. It was from these new colonies that the numerous men and ponies, held necessary in view of the transport difficulties before us, had been collected so readily. Yet the land actually taken up by them seemed but a very small proportion, perhaps scarcely one-tenth of the total area awaiting cultivation. Riding over these fertile slopes where the luxuriant jungle is now steadily being cleared, it was easy for me to realize that I had here before me by far the most extensive stretch of cultivable ground within the whole of the Yārkhūn Valley, affording room for settlements quite as large as, if not larger than, those comprised in Chitrāl proper. Nor did it take me long to recognize the clear indications supporting the tradition which I heard from the intelligent Deputy-Hākim of Mīragrām and other local attendants that these recent colonists were but reclaiming ground of earlier cultivation. Everywhere on stretches of ground still awaiting reoccupation the eye could distinguish walls formed of stones which had been cleared from the quondam fields, terraces carefully levelled for irrigation, and low mounds which probably marked the position of old rubble-built habitations. The central portion of this great 'Maidān' is known by the name of *Abdullah-Khān Lasht*, 'the plain of Abdullah Khān',[14] and a tradition, of which I had heard at Chitrāl, points to a rough conical boulder in a field as a mark left by Abdullah Khān for his intended 'Noghor' or fort.

[14] *Lasht* is here the Khōwār equivalent of Persian *dasht*, 'waste plain', the phonetic change of $d > l$ being typical of the East Īrānian languages and common also in Khōwār and its kindred dialects; cf. Grierson, *Piśāca Languages*, p. 109.

Abdullah Khān, 'the Turk', as noted above, figures vaguely in Chitrāl-Mastūj tradition as a ruler preceding Khairullah and succeeding the Ra'īs or pre-Muhammadan dynasty. So he can scarcely be far removed from the seventeenth or early eighteenth century. Tradition does not assert that he actually built a fort here, and thus it seems to me very probable that the local name and the story I heard mark but a recollection of a former attempt made in Abdullah Khān's time to reoccupy this area of ancient cultivation. This assumption is supported by the mention made of the site in those remarkably accurate route surveys which Mughul Bēg, the native author, recorded about 1790. He tells us: 'Leaving Gazzin (i. e. Gazan in Jhōpu), you cross the river of Chitrál or Ḳáshḳár by a wooden bridge, and, proceeding for a distance of twelve kuroh north, reach Sar-i-Yár-Khún, the name of a desolate village at the foot of the mountains of perpetual snow—Tíraj-Mír or Sarowar.'[15] The description of his further march up to the 'Kotal or Pass of Palpí Sang', i. e. the Barōghil, and the distance given from Gazan, which agrees exactly with that to Abdullah-Khān Lasht, make it certain that this abandoned village site is meant by the author, and that he saw it much as it must have appeared before its recent reclamation. *Site of 'Abdullah Khān's Lasht'.*

Beyond Abdullah-Khān Lasht there extends along the river for over two miles a broad belt of jungle with thickets of willows, wild poplars, and juniper, called Chakār-kuch. Though now in places almost impenetrable, this jungle undoubtedly occupies ground once under cultivation, as shown by the lines of heaped-up stones marking the division of fields, by walled-up terraces, &c. The juniper forest continues, though with reduced width, as far as Kankhun-kuch, where a stream joins from a high pass leading across the main Hindukush watershed to Sanīn in Wakhān. Here I halted for the night. The total length of the open ground along the right river bank from above Imkip to Kankhun-kuch is fully eight miles, with a maximum width of one and a half miles, and over the lower half of this distance cultivation had been resumed in patches.

As I rode for miles past these abandoned village lands, now gradually undergoing reclamation, the sight brought back forcibly to my mind the passage of the T'ang Annals which mentions *A-shê-yü-shih-to* as the chief place of the mountain territory of Shang-mi or Mastūj.[16] Considering that there is certainly no larger cultivable area anywhere in the Yārkhūn Valley, and taking into account also the position assigned in Wu-k'ung's itinerary to Chü-wei, of which A-shê-yü-shih-to was the chief place,[17] it appears to me certain that 阿賒颶師多 *A-shê-yü-shih-to*[18] is but the Chinese transcription of an earlier form of the name of *Shuyist*, still applied in a general way to the whole of this tract of cultivable ground. *A-shê-yü-shih-to of T'ang Annals.*

Local opinion, as I heard it at the time, was inclined to attribute the former abandonment of these lands to the increasing cold brought about by the advance of the glaciers. The latter, it is true, began from this point onwards to figure very conspicuously in the landscape. Just opposite Abdullah-Khān Lasht, a huge river of ice, known as Shayōs, was pushing its dark snout from the south low down towards the river bank (Fig. 14). The terminal ice-wall, fully 100 feet in height as it looked to me from across the river, was said to have moved forward considerably during the last few years, and a comparison of the position assigned to it in the map which is based on a survey of 1895 *Abandoned village lands.*

[15] Cf. Raverty, *Notes on Afghānistān*, p. 188.

[16] See above, p. 42.

[17] Wu-k'ung after leaving Hu-mi, or Wakhān, first mentions Chü-wei (or Shang-mi) and then passes through Ho-lan and Lan-so before reaching Yeh-ho (*recte* Yeh-to) or Yasīn territory; cf. Chavannes-Lévi *L'Itinéraire d'Ou-k'ong*, p. 12, and above, p. 8. In view of the explanations I have given there as to Wu-k'ung's route down the Yārkhun and thence through Lāspur, it is clear that the 'capital' of Chü-wei must be placed far up the Yārkhūn to permit of the mention of the territory of Ho-lan between it and Lan-so, i. e. Lāspur.

[18] The initial character *a* 阿 is one of those several characters with the phonetic value of *a* or *ho* which figure at the commencement of transcribed names without representing a phonetic value; see Julien, *Méthode pour déchiffrer*, p. 53. It must be remarked, however, that the Indian names there given as examples all begin with *r*.

(Northern Trans-frontier Sheet No. 2, S. W.) seems to support the statement. Yet, in spite of this recent advance, the reoccupation of the fertile soil on the river's right bank was acknowledged to be continuing, a fact which is apt to raise doubts as to the correctness of the local explanation proffered for the former abandonment.

Reoccupation of village sites.

Even without that chill neighbour the climate of Shuyist, about 10,500 feet above the sea, is bound to be cold, a characteristic which the Chinese notice asserts of Shang-mi, and, in fact, at the time of my passage, May 15, the first shoots of grass were only just appearing. Yet corn and oats were said to grow well, and I subsequently met recent cultivation near Vedīnkōt, much further up the valley and in even closer vicinity to glaciers. So the question as to the reason of that abandonment has at present to be left open. But there remains the interesting fact that the main cause now leading to the reoccupation of this tract, for centuries overrun by jungle, is the incipient pressure of the population, felt throughout these valleys, and a direct result of the British pacification of the country. As long as Chitrāl and Mastūj were the scenes of almost constant feudal struggles and usurpations, and the selling of subjects as slaves to neighbouring territories was a recognized source of revenue to the rulers, there could manifestly be no surplus population to reclaim lands which at an earlier period had been for some reason deserted.[19]

The march of some twenty miles, which brought me on May 16 to the foot of the Darkōt Glacier, was easy enough thus early in the season. But the succession of narrow defiles flanked by precipitous cliffs and frowning glaciers, through which the route by the river leads, and of which I have given a description in my personal narrative,[20] conveyed a sufficient idea of the difficulties which are encountered here when the melting snows make the passage of the river-bed impossible, and practically close the route for the spring and summer. But even in these desolate and forbidding surroundings I recognized terraced fields of an earlier time at the debouchures of several side-gorges from the south, amidst streaks of detritus stretching down from the end of glaciers.

Cultivation at foot of glaciers.

It was still more surprising to find, after we had passed the Kōtal-kash Glacier, now advanced right to the river's edge, that the little bays of open ground visible on the left bank as far as the Koyo Glacier were occupied by fields actually under cultivation. They belonged to four families of Wakhī immigrants who some six or seven years before had settled in these seemingly semi-arctic surroundings to resume lands which had obviously been abandoned for a protracted period. Other patches of ground, showing old cultivation terraces but not yet reclaimed by the plough, were noticed by me when subsequently crossing the broad grassy shoulder of Vedīnkōt which faces the magnificent Chatiboi Glacier, and again below the Rukang spur, where it flanks the stream coming from the Darkōt Glacier (Fig. 20).

Section V.—KAO HSIEN-CHIH'S EXPEDITION AND THE DARKŌT

It was at the foot of the Rukang spur that I pitched my camp for a day in order to make the ascent to the summit of the Darkōt Pass, which Chapter VI of my personal narrative describes in detail. I had set my heart on this ascent, in spite of the difficulties and risks attending it at so early a season, and after that spring's exceptionally heavy snowfall. The reason was that I eagerly wished to see with my own eyes the scene of the memorable exploit by which the Chinese general, Kao Hsien-chih, in A.D. 747 had led his force of 3,000 soldiers across the ice-covered Darkōt Pass to the successful invasion of Yasīn and Gilgit. I have given a general account of the operations connected with this invasion when discussing in my *Ancient Khotan* the early Chinese records con-

[19] It is a significant fact that in Hunza where the pressure of population has been felt for a long time back, cultivation ascends in the Chaparsun Valley considerably above the elevation of Shuyist. Yet the climatic conditions must be practically the same. The same holds good of Wakhān.

[20] See *Desert Cathay*, i. p. 53.

cerning 'Little P'o-lü'.[1] It will, however, be convenient to indicate the main outlines here afresh, as this will render it easier to follow the details I shall have to offer concerning the different localities through which Kao Hsien-chih's march may be traced, and which my own route further on touched. Our knowledge of the events to be summarized and explained is derived wholly from the Chinese official records contained in the T'ang Annals, and rendered accessible by M. Chavannes.[2]

Struggle of Chinese and Tibetans.

Some years after A. D. 741 the Tibetans, to whose long-continued struggle against Chinese dominion in the Tārīm Basin reference has already been made, succeeded in winning over Su-shih-li-chih, the king of Little P'o-lü, i. e. Gilgit and Yasīn, and made him marry a Tibetan princess. In consequence, the Annals tell us, 'more than twenty principalities of the north-west became subject to the Tibetans; their tribute and offerings no longer reached the Imperial court'. After three expeditions organized by the 'Protector of the Four Garrisons', the Governor-General of the district corresponding to the present Chinese Turkestān, had failed, an Imperial decree in A.D. 747 directed the Deputy-Protector Kao Hsien-chih to take charge of the campaign against the Tibetans in 'Little P'o-lü' with a force of 10,000 cavalry and infantry. Starting from An-hsi, the present Kuchā, he reached Su-lê or Kāshgar in thirty-five days, probably through Ak-su and by the old high road leading north of Maral-bāshi. Twenty days more brought his force to the military post of the Ts'ung-ling Mountains, established in the position of the present Tāsh-kurghān in Sarīkol. Thence by a march of twenty days the 'valley of Po-mi', or the Pāmīrs, was gained, and after another twenty days Kao Hsien-chih arrived in 'the kingdom of the five Shih-ni', i. e. the present Shighnān on the Oxus.

Kao Hsien-chih's march across the Pāmīrs.

The marching distance here indicated agrees well with the time which large caravans of men and transport animals would at present need to cover the same ground. But how the Chinese general managed to feed so large a force after once it had entered the barren mountains beyond the outlying oases of the present Kāshgar and Yangi-Hisār districts is a problem which might look formidable indeed to any modern commander. In the Annals biography it is particularly noted that 'at that time the foot soldiers all kept horses (i. e. ponies) on their own account'. Such a provision of transport must have considerably increased the mobility of the Chinese troops. But it also implied greatly increased difficulties about supplies on the passage through ranges which, with the exception of certain portions of the Pāmīrs, do not afford sufficient grazing to keep animals alive without liberal provision of fodder.

It was probably as a strategic measure meant to reduce the difficulties of supply in this inhospitable Pāmīr region that Kao Hsien-chih divided his forces into three columns as a preliminary to his attack upon the position held by the Tibetans at Lien-yün. M. Chavannes has shown good reason for assuming that by the river P'o-le or So-le, which is described as flowing in front of Lien-yün, is meant the Āb-i-Panja branch of the Oxus, and that Lien-yün itself occupied a position corresponding to the present village of Sarhad, but on the opposite or southern side of the river, where the route from the Barōghil Pass debouches on the Āb-i-Panja. We shall return to this identification in detail hereafter. Here it will suffice to show that this location is also clearly indicated by the details recorded of the concentration of Kao Hsien-chih's forces upon Lien-yün.

Concentration upon Lien-yün.

Of the three columns which were to operate from different directions and to effect a simultaneous junction before Lien-yün on the thirteenth day of the seventh month (about the middle of August),

[1] See *Ancient Khotan*, i. pp. 8 sqq.

[2] Cf. Chavannes, *Turcs occid.*, p. 151, for the notice on P'o-lü, and p. 152, note 1, where interesting and much fuller details are reproduced from Kao Hsien-chih's official biography. To M. Chavannes belongs all credit for having recognized that Kao Hsien-chih's expedition took him over the Barōghil and Darkōt Passes. But he does not attempt to trace in detail the localities which the Chinese accounts mention along the route both to the north and south of the Hindukush.

the main force under Kao Hsien-chih himself and the Imperial Commissioner Pien Ling-ch'êng passed through the kingdom of Hu-mi or Wakhān, ascending the main Oxus valley from the west. Another column which is said to have moved upon Lien-yün by the route of *Ch'ih-fo-t'ang*, 'the hall of the red Buddha', may be assumed, in view of a subsequent mention of this route below,[3] to have operated from the opposite direction down the headwaters of the Āb-i-Panja. These could be reached without serious difficulty from the Sarīkol base either over the Tāghdumbāsh Pāmīr and the Wakhjīr Pass, or by way of the Naiza-tāsh Pass and the Little Pāmīr. Finally, a third column composed of 3,000 horsemen, which was to make its way to Lien-yün by *Pei-ku* or 'the northern gorge', may be supposed to have descended from the side of the Great Pāmīr. For such a move from the north either one of the several passes could be used which lead across the Nicholas Range south-east of Victoria Lake, or possibly some track as yet unexplored descending by one of the gorges which debouch east of Sarhad. In any case it is clear that by thus bringing up his forces on convergent but wholly distinct lines, and by securing for himself a fresh base in distant Shighnān, the Chinese general effectively guarded against those difficulties of supplies and transport which then as now would make the united move of so large a body of men across the Pāmīrs a physical impossibility.[4]

[3] Some distinct indication as to the position of the 'hall of the red Buddha', whatever may have been meant by this designation, is supplied by what Kao Hsien-chih's biography tells us of his return from Little P'o-lü. After having secured the king and his consort and pacified the whole territory, he is said to have retired by the route of 'the hall of the red Buddha' in the eighth month of the year A. D. 747. In the following month he rejoined the troops he had left behind at Lien-yün, i. e. at Sarhad, and by the end of the same month regained 'the valley of Po-mi' or the Pāmīrs.

Reference to the map shows that there are only two direct routes, apart from the Darkōt-Barōghil route, by which the Upper Āb-i-Panja Valley can be gained from Gilgit-Yasīn. One leads up the difficult gorge of the Karambār River to its headwaters east of the Yārkhūn River sources, and thence across the Khora-bohrt or Gazan Pass and down the Lupsuk Valley to the Āb-i-Panja. This it strikes at a point close to Kārwān-balasi, about half-way between Bozai-gumbaz and Langar and two and a half marches above Sarhad (see below, p. 72). The other, a longer but distinctly easier route, leads up the Hunza River to Guhyāl whence the Āb-i-Panja headwaters can be gained either via the Kilik and Wakhjīr Passes (the route I followed myself in 1901, as described in my *Ruins of Khotan*, chaps. III, IV) or by the Irshad Valley. From the head of the latter the less known but not particularly difficult Irshad Pass gives access to the Lupsuk Valley debouching near Kārwān-balasi on the Āb-i-Panja.

Taking into account the distinct statement that Kao Hsien-chih left after the whole kingdom had been pacified, it is difficult to believe that he should not have visited Gilgit, the most populous and important portion of 'Little P'o-lü'. In this case the return by the Hunza River route would have offered manifest advantages, such as a passage through relatively fertile tracts which had not yet been touched by invasion and would thus afford fresh resources. This assumption receives support also from the long time, one month, indicated between the start on the return march and the arrival at Lien-yün. Whereas the distance from Gilgit to Sarhad via Hunza and the Irshad Pass is now counted at about twenty-two marches, that from Gilgit to the same place by the Karambār River and across the Khora-bohrt Pass is reckoned at only thirteen. But the latter route is described as very difficult at all times, and quite impracticable in the summer and early autumn when the Karambār River completely fills its rock-bound gorge. Hence its use for Kao Hsien-chih's return march would appear very improbable considering the time of year indicated, middle of September to middle of October.

The important fact, however, is that both routes would have brought Kao Hsien-chih to the same point on the uppermost Āb-i-Panja, opposite to the locality known as Dasht-i-Mīrzā Murād, which must be passed by all wishing to gain Sarhad from the east. It is this circumstance which suggests to me that 'the hall of the red Buddha' must be located somewhere in this vicinity. Now it is certainly curious that we find just here, near the eastern end of the Dasht-i-Mīrzā Murād, the small ruin known as *Kārwān-balasi* which has all the structural features of a Buddhist shrine though now reverenced as a Muhammadan tomb. Is it possible that we have here another trace of a lingering local cult, connected in this case with the 'hall of the red Buddha' once worshipped on this desolate route? For the ruin of Kārwān-balasi and the traces of old cultivation at Langar, the halting-place some ten miles further down on the route, cf. below, pp. 70 sqq.; Fig. 4.

[4] The crossing of the Pāmīrs by a force, which in its total strength amounted to ten thousand men, is so remarkable a military achievement that the measures which alone probably made it possible deserve some closer examination, however succinct the Chinese record is upon which we have to base it. So much appears to me clear that the march was not effected in one body but in three columns moving up

Tibetan defeat at Lien-yün.

The location of Lien-yün near Sarhad, as originally proposed by M. Chavannes, is confirmed by the description of the battle by which the Chinese general rendered himself master of the Tibetan position and of the route it was intended to guard. But, as I shall have occasion to discuss the topographical details hereafter, a brief summary must now suffice. The stronghold of Lien-yün itself was occupied by a thousand Tibetans, and the river which lay to their front offered a serious obstacle, being then in flood. The main force of the enemy, comprising 8,000 or 9,000 men, was posted fifteen li, or about three miles, to the south, where advantage had been taken of the mountainous ground to erect palisades. Kao Hsien-chih, however, after offering a sacrifice to the river, succeeded with a picked body of mounted men in crossing unopposed and without loss. Encouraged by this success the Chinese general at once attacked, leading his troops up the mountain side and engaging the defenders in a fight which ended in their complete defeat with heavy loss, and the precipitate flight of the survivors during the night. In their pursuit the Chinese inflicted a loss upon them of 5,000 men killed and a thousand prisoners, while all the rest dispersed. Over a thousand horses and abundant stores and arms fell into the hands of the victors. It is clear that this battle was fought at the entrance of the valley which ascends south towards the Barōghil saddle from opposite Sarhad.[5]

Chinese Advance across Mount *T'an-chü.*

As Pien Ling-ch'êng, the Imperial Commissioner, and certain other high officers feared the

from Kāshgar in successive stages by the same route of which Tāsh-kurghān, 'the post of the Ts'ung-ling Mountains', was the advanced base or *point d'appui.* If Kao Hsien-chih moved ahead with the first column or detachment to Shighnān and was followed at considerable intervals by the other two detachments, the advantages gained as regards supplies and transport must have been very great. His own column would have reached a fresh base of supplies in Shighnān while the second was moving across the main Pāmīrs and the third arriving in Sarīkol from the plains. Thus the great strain of having to feed simultaneously the whole force on ground absolutely devoid of local resources was avoided. It must be remembered that once on the middle Oxus the Chinese Commissariat could easily draw upon the abundant produce of Badakhshān, and that for the column left on the Pāmīrs the relatively easy route across the Alai would be available for drawing supplies from the rich plains of Farghāna, then still under Chinese control.

By disposing his force *en échelon* from Shighnān to Sarīkol Kao Hsien-chih obtained also a strategically advantageous position. He was thus able to concert the simultaneous convergent movement of his columns upon the Tibetans at Sarhad, without unduly exposing any of his detachments to separate attack and defeat by a superior Tibetan force; for the Tibetans could not leave their position at Sarhad without imminent risk of being cut off from the Barōghil, their only line of communication. At the same time the disposition of the Chinese forces effectively precluded any Tibetan advance either upon Sarīkol or Badakhshān. Difficult as Kao Hsien-chih's operations must have been across the Pāmīrs, yet he had the great advantage of commanding two, if not three, independent lines of supplies (from Kāshgar-Yarkand; Badakhshān; eventually Farghāna), whereas the Tibetan force of about equal strength cooped up at the debouchure of the Barōghil had only a single line, and one of exceptional natural difficulty, to fall back upon. Of the territories of Yasīn, Gilgit, Baltistān, through which this line led we know that they could not provide any surplus supplies for an army (cf. *Ancient Khotan*, i. pp. 11 sqq.).

The problem, as it seems to me, is not so much how the Chinese general succeeded in overcoming the difficulties of his operations across the Pāmīrs, but how the Tibetans ever managed to bring a force of nine or ten thousand men across the Darkōt to Sarhad and to maintain it there in the almost total absence of local resources. It is certainly significant that neither before nor after these events do we hear of any other attempt of the Tibetans to attack the Chinese power in the Tārīm Basin by way of the uppermost Oxus, constant, and in the end successful, as their aggression was during the eighth century A. D.

The boldness of the plan which made Kao Hsien-chih's offensive possible and crowned it in the end with deserved success, must, I think, command admiration quite as much as the actual crossing of the Darkōt. The student of military history has, indeed, reason to regret that the Chinese record does not furnish us with any details about the organization which rendered this first and, as far as we know, last crossing of the Pāmīrs by a large regular force possible. But whatever our opinion may be about the fighting qualities of the Chinese soldier as judged by our standards—and there is characteristic evidence of their probably not having been much more serious in T'ang times than they are now—it is certain that those who know the formidable obstacles of deserts and mountains which Chinese troops have successfully faced and overcome during modern times, will not feel altogether surprised at the power of resource and painstaking organization which the success of Kao Hsien-chih's operations indisputably attests in that long-forgotten Chinese leader and those who shared his efforts.

[5] See below, pp. 66 sqq.

risks of a further advance, Kao Hsien-chih decided to leave them behind together with over 3,000 men who were sick or worn out by the previous hardships, and to let them guard Lien-yün. With the rest of his troops he pushed on, and after three days arrived at Mount T'an-chü; from that point downwards there were precipices for over forty li in a straight line. Kao Hsien-chih surmised: 'If the barbarians of A-nu-yüeh were to come to meet us promptly this would be the proof of their being well-disposed.' Fearing besides that his soldiers would not care to face the descent (from Mount T'an-chü), he employed the stratagem of sending twenty horsemen ahead with orders to disguise themselves in dress as if they were barbarians of the town of A-nu-yüeh, and to meet his troops on the summit of the mountain. When the troops had got up Mount T'an-chü they, in fact, refused to make the descent, saying: 'To what sort of places would the Commissioner-in-Chief have us go?' Before they had finished speaking, the twenty men who had been sent ahead came to meet them with the report: 'The barbarians of the town of A-nu-yüeh are all well-disposed and eager to welcome you; the destruction of the bridge over the So-yi River is completed'.[6] Kao Hsien-chih pretended to rejoice, and on his giving the order all the troops effected the descent.

Chinese occupation of Little P'o-lü.

After three more marches the Chinese force was in reality met by 'the barbarians of the town of A-nu-yüeh' offering their submission. The same day Kao Hsien-chih sent ahead an advance guard of a thousand horsemen, charging its leader to secure the persons of the chiefs of Little P'o-lü through a ruse. This order having been carried out, on the following day Kao Hsien-chih himself occupied A-nu-yüeh and had the five or six dignitaries who were supporting the Tibetans executed. He then hastened to have the bridge broken which spanned the So-yi River at a distance of sixty li, or about twelve miles, from A-nu-yüeh. 'Scarcely had the bridge been destroyed in the evening when the Tibetans, mounted and on foot, arrived in great numbers, but it was then too late for them to attain their object. The bridge was the length of an arrowshot; it had taken a whole year to construct it. It had been built at the time when the Tibetans, under the pretext of using its route, had by deceit possessed themselves of Little P'o-lü.' Thus secured from a Tibetan counter-attack on Yasīn, Kao Hsien-chih prevailed upon the king of Little P'o-lü to give himself up from his hiding-place and completely pacified the territory.

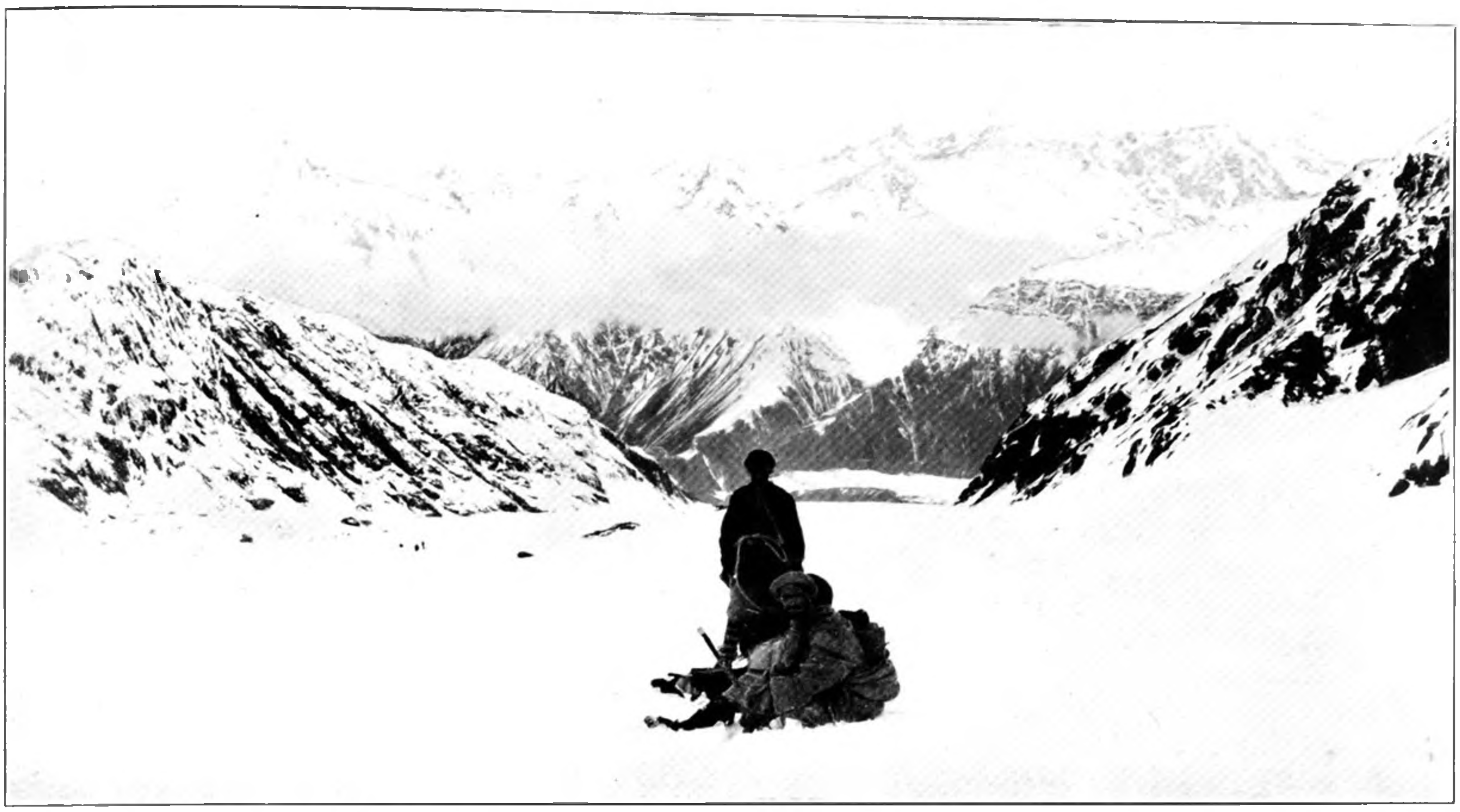
Identification of Kao Hsien-chih's route.

In discussing Kao Hsien-chih's exploit in *Ancient Khotan*, I found it easy to trace on the map the successive stages of his progress. But the personal acquaintance with the ground which I gained on my journey up the Yārkhūn and across to Sarhad, has rendered it still easier to obtain certainty on a number of topographical points. All the details furnished by the Chinese record agree accurately with the important route that leads across the remarkable depression in the Hindukush Range, represented by the adjacent Barōghil and Shawitakh Passes (12,460 and 12,560 feet respectively above sea level) to the sources of the Mastūj River, and then, surmounting southwards the ice-covered Darkōt Pass (*circ.* 15,380 feet) descends the valley of Yasīn to its debouchure on the main river of Gilgit.

Two glacier routes across Darkōt.

Owing to a curious orographic configuration two great ice-streams descend from the northern face of the Darkōt Pass. One, the Darkōt Glacier properly so called, slopes down to the north-west with a very easy fall for a distance of nearly eight miles, pushing its snout to the foot of the Rukang spur. The other, which on the map is shown quite as long but which reliable information represents as somewhat shorter, descends also gradually towards the north-east and ends some miles above the

[6] The biography calls this bridge 'pont de rotin' in M. Chavannes' translation, *Turcs occid.*, p. 153. But there can be no doubt that what is meant is a 'rope bridge' or 'Jhūla', made of twigs twisted into ropes, a mode of construction still regularly practised in all the valleys between Kashmīr and the Hindukush. Rope bridges of this kind across the Gilgit River near the debouchure of the Yasīn River were the only permanent means of access to the Yasīn Valley from the south until the wire suspension bridge near the present fort of Gūpis was built after 1895.



19. VIEW FROM TOP OF DARKŌT PASS TO NORTH-WEST ACROSS DARKŌT GLACIER TOWARDS OXUS-INDUS WATERSHED.

20. VIEW OF DARKŌT GLACIER FROM FOOT OF RUKANG SPUR, LOOKING SOUTH.

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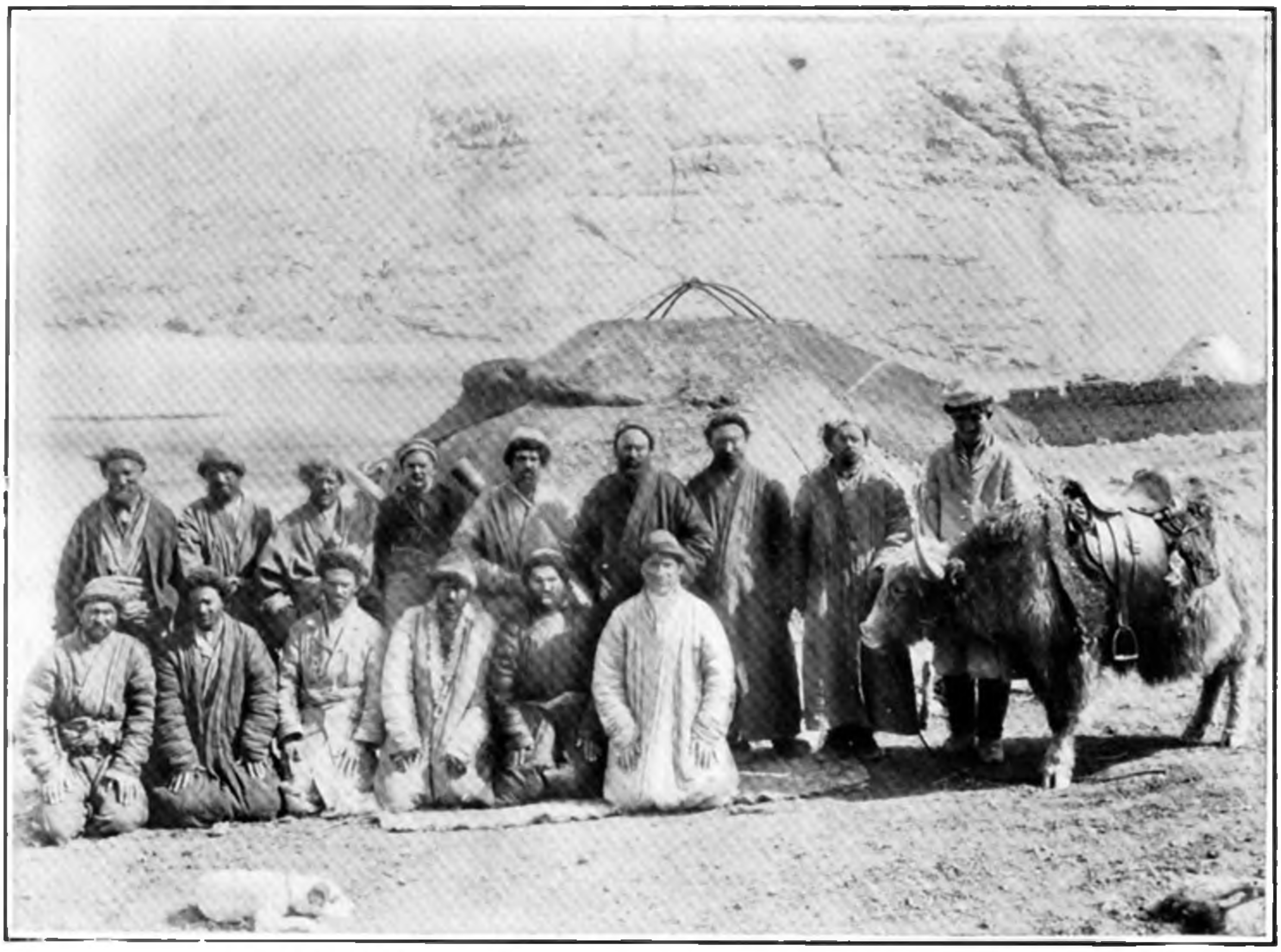
21. BADAKHSHĪ IMMIGRANTS IN CHITRĀL.

23. PAKHPU HILLMEN, ANTHROPOMETRICALLY EXAMINED AT KÖK-YĀR.



22. SARĪKOLĪS AND KIRGHIZ AT PAYIK POST, TĀGHDUMBĀSH.

24. SARĪKOLĪS, ANTHROPOMETRICALLY EXAMINED AT TĀSH-KURGHĀN.

summer grazing-ground of Showar-shur on the uppermost Yārkhūn River. Thus two divergent routes offer themselves to the traveller who reaches the Darkōt Pass from the south and wishes to proceed to the Oxus. The one keeping to the Darkōt Glacier, which I followed myself on my visit to the Darkōt Pass, has its continuation in the easy track which crosses the Rukang spur and then the Yārkhūn River below it to the open valley known as Barōghil Yailak, and thence ascends over a very gentle grassy slope to the Barōghil saddle, characteristically called *Dasht-i-Barōghil*, 'the plain of Barōghil'. From this point it leads down over equally easy ground, past the hamlet of Zartighar, to the Āb-i-Panja opposite Sarhad. The other route, after descending the glacier to the north-east of the Darkōt Pass, passes down the Yārkhūn River past the meadows of Showar-shur to the grazing-ground of Shawitakh-yailak and thence reaches the Hindukush watershed by an easy gradient near the lake of Shawitakh or Sarkhin-zhoe. The saddles of Barōghil and Shawitakh are separated only by about two miles of low, gently sloping hills, and at Zartighar both routes join.

Advantages of north-eastern route.

The distances to be covered between the Darkōt Pass and Sarhad are practically the same by both these routes as far as the map and other available information allow me to judge. My original intention was to examine personally those portions of both routes which lie over the glaciers and permanent snow-fields of the Darkōt. But the uncertain weather conditions prevailing at the time of my ascent and the exceptional difficulties which, as described in my personal narrative, were encountered owing to the early season and the heavy snowfall of that spring, effectively prevented my plan of ascending from the side of Vedīnkōt and descending to Showar-shur. Having thus personal experience only of the north-west route I am unable to judge to what extent present conditions justify the report which represents the glacier part of the north-eastern route as somewhat easier. It is, however, a fact that the Pāmīr Boundary Commission of 1895 with its heavy transport of some six hundred ponies used the latter route both coming from and returning to Gilgit. The numerous losses reported of animals and loads show that here, too, the passage of the much-crevassed glacier and the treacherous snow-covered moraines proved a very serious difficulty for the transport. Nevertheless, inasmuch as for a force coming from the Wakhān side the ascent to the Darkōt Pass from the nearest practicable camping-ground would be about 1,300 feet less by the Showar-shur route than by that passing the Rukang spur, I consider it probable that the former was used.

Itinerary of Kao Hsien-chih.

Kao Hsien-chih's biography states that it took the Chinese general three days to reach 'Mount T'an-chü', i. e. the Darkōt, but does not make it quite clear whether thereby the arrival at the north foot of the range or on its crest is meant. If the latter interpretation is assumed, with the more rapid advance it implies, it is easy to account for the time taken by a reference to the ground; for, although the Shawitakh-Barōghil depression is crossed without any difficulty in the summer, no military force accompanied by baggage-animals could accomplish the march from Sarhad to the southern foot of the Darkōt in less than three days, the total marching distance being about thirty miles. Even a four days' march to the crest, as implied in the first interpretation, would not be too large an allowance, considering the high elevations and the exceptional difficulties offered by the glacier ascent at the end.

Identity of Mt. T'an-chü with Darkōt Pass.

The most striking evidence of the identity of 'Mount T'an-chü' with the Darkōt is supplied by the description given in the record of 'the precipices for over forty li in a straight line' which dismayed the Chinese soldiers on looking down from the heights of Mount T'an-chü. All descriptions of the pass emphasize the extreme steepness of the slope on the southern face of the Darkōt. There the track, mostly over moraine débris and bare rock, descends close on 6,000 feet in a distance of little more than five miles before reaching the nearest practicable camping-ground above the small

village of Darkōt.[7] Well could I understand the reluctance shown to further advance by Kao Hsien-chih's cautious 'braves', as from the top of the pass I looked down through temporary rifts in the brooding vapour into the seeming abyss of the valley.[8] The effect was still further heightened by the wall of soaring ice-clad mountains which showed across the head of the Yasīn Valley south-eastwards as the clouds lifted, and by the contrast which the depths before me presented to the broad and snowy expanse of the glacier *firn* sloping gently away on the north (Fig. 20). Taking into account the close agreement between the Chinese record and the topography of the Darkōt, we need not hesitate to recognize in *T'an-chü* an endeavour to give a phonetic rendering of some earlier form of the name *Darkōt*, as accurate as the imperfections of the Chinese transcriptional system would permit.

Kao Hsien-chih's stratagem.

The stratagem by which Kao Hsien-chih met and overcame the reluctance of his troops which threatened failure when success seemed assured, wears a truly Chinese appearance. The fore-thought shown in preparing this ruse is a proof alike of Kao Hsien-chih's judgement of men and of the extreme care with which every step of his great enterprise must have been planned. But such a ruse, to prove effective, must have remained unsuspected. I cannot suppress the surmise that in planning it full advantage was taken of the peculiar configuration of the Darkōt which provides, as seen, a double route of access to the pass. If the party of men sent ahead to play the rôle of the 'barbarians of Little P'o-lü' offering their submission, were dispatched by the Barōghil and Rukang route while the troops marched by the Shawitakh–Showar-shur route, all chance of discovery while on the move would be safely guarded against. A remarkable topographical sense has always been a peculiar feature of the Chinese, so that doubtless Kao Hsien-chih took full account of the alternative routes. Nor could it have been particularly difficult for him to find suitable actors, in view of the generous admixture of local mercenaries which the Chinese forces in Central Asia have at all times comprised.[9]

Advance in Yasīn Valley.

The remaining stages of Kao Hsien-chih's advance can be traced with equal ease. The three marches which brought him from the southern foot of the pass to 'the town of A-nu-yüeh', obviously correspond to the distance exceeding twenty-seven miles reckoned between the first camping-ground below the Darkōt to the large village of Yasīn. The latter, by its position and the abundance of cultivable ground near by, must always have been the political centre of the Yasīn Valley. Hence it is reasonable to assume that we have in *A-nu-yüeh* a fairly accurate reproduction of the name *Arniya* or *Arniah* by which the Dards of the Gilgit Valley know Yasīn.[10]

Bridge across Gilgit River.

The best confirmation of this identification is furnished by the statement of the Chinese record that the bridge across the River *So-i* was situated sixty li from A-nu-yüeh. Since the T'ang Annals' notice of Little P'o-lü names the River So-i as the one on which Yeh-to, the capital of the kingdom, stood, the Gilgit River must be meant. Now a reference to the map shows that, in a descent of the valley from Yasīn, the Gilgit River is reached at a distance of about twelve miles, which is consistent with the sixty li of the Chinese account. It is evident also that, since the only practicable route towards Gilgit proper and the Indus Valley leads along the right or southern bank of the Gilgit River, the Tibetan reinforcements hurrying up from that direction could not reach Yasīn without first crossing the river. This explains the importance attaching to the bridge and the prompt steps taken by the Chinese leader to have it broken. As the Gilgit River is quite unfordable in the summer the destruction of the bridge sufficed to assure safe possession of Yasīn.

[7] Cf. Mr. Littledale's account in the *Geographical Journal*, N. S. xiv (1892). pp. 24, 5.

[8] Cf. *Desert Cathay*, i. p. 58.

[9] The T'ang Annals mention specifically in the account of Shih-ni or Shighnān, on the Oxus, that its chief in A.D. 747 followed the Imperial troops in their attack on Little P'o-lü and was killed in the fighting; see Chavannes, *Turcs occid.*, p. 163.

[10] Biddulph, *Hind Koosh*, p. 62.

Results of successful expedition.

The statements as to the subsequent pacification of Little P'o-lü and the return of Kao Hsien-chih have been discussed above. According to the T'ang Annals the victorious general repaired to the Imperial capital taking with him in triumph the captured king Su-shih-li-chih and his consort. The Emperor pardoned the captive chief and enrolled him in the Imperial guards. But his territory was turned into a Chinese military district under the designation of *Kuei-jên*, and a garrison of one thousand men established there.[11] The deep impression which Kao Hsien-chih's remarkable expedition must have produced in all neighbouring regions, is duly reflected in the closing remarks of *T'ang shu*: 'Then the *Fu-lin* (Syria), the *Ta-shih* (i. e. the Tāzī or Arabs) and seventy-two kingdoms of divers barbarian peoples were all seized with fear and made their submission.'

It was the greatness of the natural obstacles overcome on this victorious march across the inhospitable Pāmīrs and the icy Hindukush which made the fame of this last Central Asian success of the T'ang arms spread so far. Hence it was no small satisfaction to me to see with my own eyes how closely the conditions on the Darkōt and beyond, by the uppermost Oxus, agreed with the record of Kao Hsien-chih's exploit. If judged by the physical difficulties encountered and vanquished, the achievement of the able Corean general deserves fully to rank by the side of the great alpine feats of commanders famous in European history. He, for the first, and perhaps the last, time led an organized army right across the Pāmīrs and successfully pierced the great mountain rampart that defends Yasīn and Gilgit from northern invasion. Respect for the energy and skill of the leader must increase with the recognition of the traditional weakness which the Annals' ungarnished account reveals in his men.

[11] See Chavannes, *Turcs occid.*, pp. 151 sqq.

CHAPTER III

FROM THE OXUS TO KHOTAN

Section I.—EARLY ACCOUNTS OF WAKHĀN

THE long-stretched valley of Wakhān to which I descended on May 19, 1906, across the Barōghil saddle, had appeared to me from the first one of the most interesting stages of my journey. It was not merely that I touched here the easternmost marches of true Īrān and the headwaters of the River Oxus, which ever since my youth I had longed to follow down to regions of fascinating historical interest: I knew also that I stood here on what from earliest times must have been a main route linking Western Asia, and through it the classical world, with innermost Central Asia and thus the Far East.

Geographical importance of Wakhān.

Nature itself, as it were, seems to have intended Wakhān to serve as the most direct thoroughfare from the fertile regions of Badakhshān to the line of oases along the southern rim of the Tārīm Basin; for along the whole of the Āb-i-Panja Valley from Ishkāshim where the Badakhshān route joins in, right up to Sarhad, a distance of close on a hundred and twenty miles, travel is facilitated by the remarkably easy nature of the ground and the presence of cultivation. Beyond Sarhad, it is true, the Āb-i-Panja is confined to a narrow gorge which provides two trying marches. But further on the road lies open past the Little Pāmīr to the Wakhjīr Pass which for a considerable part of the year gives easy access to Sarīkol, the westernmost inhabited valley on the headwaters of the Yārkand River. The importance of Wakhān as a thoroughfare from west to east is still further increased by the fact that the two difficult marches above Sarhad can be avoided by the somewhat longer alternative route which ascends the northern branch of the Āb-i-Panja to the Great Pāmīr and thence crossing the Little Pāmīr reaches Sarīkol by one or another of the passes, all lower than the Wakhjīr.

Early Chinese notices of Wakhān.

To the position of Wakhān on the most direct routes linking the Oxus and Tārīm is owed the relative abundance of early notices dealing with it which can be gathered from the records of Chinese annalists and travellers. The oldest of these is probably furnished by the Annals of the Former Han Dynasty. These mention *Hsiu-mi* 休密 as the first of the five territories ruled by Jabgus (*Shih-hu*) which belonged to the great Yüeh-chih nation after its conquest of the regions south of the Oxus. That Hsiu-mi is but an earlier transcription of the old name of Wakhān which appears as *Hu-mi* 護密 in the T'ang Annals is rendered probable by a notice of the *Pei-shih*. This, while reproducing the statement about the ancient Yüeh-chih territory, distinctly indicates that it lay to the west of So-ch'ê or Yārkand.[1] According to the *Pei-shih's* record which dates from the early part of the 7th century, the territory then bore the name of *Ch'ieh-pei* 伽倍. The name of its capital is still given as Ho-mo 和墨, the same as in the Han Annals.

Sung Yün's description of Wakhān.

The first actual description of Wakhān is given in the accounts of Sung Yün and his fellow pilgrim Hui-shêng who in A. D. 519 passed down the valley on their way from Sarīkol to Udyāna.[2]

[1] Cf. Chavannes, *Pays d'occident*, p. 44 note, and Marquart, *Ērānšahr*, p. 225, where the early names of Wakhān have been lucidly discussed. The identification of Hsiü-mi with Hu-mi was first suggested by Cunningham, *J.A.S.B.*, xiv. p. 433. Cf. also Yule, *J.R.A.S.*, N. S. vi. pp. 111 sqq.

[2] Cf. Chavannes, *Voyage de Song Yun*, p. 23; also Marquart, *Ērānšahr*, pp. 223 sq.

Sung Yün narrates that after crossing the Ts'ung-ling Mountains or the Pāmīrs from the side of Han-p'an-t'o, i. e. Sarīkol, the travellers entered the kingdom of Po-ho 鉢和 or Wakhān in the second decade of the ninth month (i. e. October). From his reference to 'high mountains and deep gorges and perilous paths' it appears probable that the pilgrim followed the route which leads down the Āb-i-Panja to Sarhad, for the description is far more appropriate to this route than to that across the Great Pāmīr. 'The place where the king resided was protected by mountain ramparts; for dress the people had only clothes of felt. The country is extremely cold; caves are dug out for quarters. As winds and snow are intense men and beasts huddle together. On the southern border of this kingdom there are great snowy mountains; the snow melts on them in the morning and freezes again at night. From afar they look like peaks of jade.'

Hui-shêng's account of Wakhān.

Hui-shêng's account preserved in the *Pei-shih* is in close agreement, but adds some useful details. 'The kingdom of Po-ho lies to the west of K'o-p'an-t'o (Sarīkol) and is even colder. Beasts and humans dwell together; holes are dug in the ground to serve for quarters. There, too, great snowy mountains rise which from afar look like peaks of silver. The people feed only on cakes and roasted corn; they drink corn-brandy and dress in felts and furs. There are two routes: one goes west to the Yeh-tas (or Hephthalites); the other leads south-west towards Wu-ch'ang (or Udyāna). This, too, is ruled by the Yeh-tas.' The bearings here indicated for the routes towards Badakhshān and Mastūj would alone suffice to prove that by Po-ho is meant Wakhān. But the general description which both pilgrims give of the country is equally convincing; for it is easy to recognize in it those characteristic features which all modern travellers from Wood downwards record of the severe climate of Wakhān, its cutting winds and harsh conditions of life.[3] The mention of the great snowy mountains to the south duly reflects the imposing appearance presented by the main Hindukush chain which towers above the whole valley. Even its comparison with peaks of jade or silver seems to bear true local colour; for it may well have been suggested by a popular interpretation of the name *Bolor* which, in varying forms and vaguely applied, has clung from an early period to the mountain region south, and which tradition has probably always connected with the term *bilaur* 'of crystal'.[4] However this may be, it is probable that the name of *Po-ho* itself, as suggested by Prof. Marquart, represents an attempt to render the designation *Wakhān* which is found already in a Muhammadan author of the 9th century A. D.[5]

Wakhān in T'ang Annals.

Wakhān figures by the same name *Po-ho* also in the list of administrative districts into which the Central Asian dominions of the Western Turks were organized after the Chinese conquest in A. D. 658. Po-ho, with the town of So-lê-so-ho, appears there as a subdivision attached to the district established in the kingdom of Hu-mi-to 護密多, which itself represents Wakhān.[6] A full account of the territory is supplied by one of the notices which the T'ang Annals devote to the 'Western regions'.[7] This is based in part on Hsüan-tsang's itinerary which is itself considered below, and states that 'the country of *Hu-mi* 護密 is called also *Ta-mo-hsi-t'ie-ti* or *Huo-k'an*; this is the country which was known as *Po-ho* under the Wei. It also forms part of the ancient dominion of the Tu-huo-lo or Tokhāristān. . . . It measures sixteen hundred li from east to west; from north to south it is confined, measuring only four to five li across. The king resides in the town of Sai-chia-shen 塞迦審; on the north it is bordered by the River *Wu-hu* or Oxus. The soil is frozen with cold; inequalities of the ground cause ups and downs; sand and stones

[3] Cf. Wood, *Journey to the Source of the Oxus*, pp. 208 sqq.; Gordon, *Roof of the World*, pp. 135–6; *Yarkand Mission Report*, pp. 273 sq.

[4] Cf. Raverty, *Notes on Afghānistān*, p. 299, where the apparent allusion in Hui-shêng's account has been quite correctly recognized.

[5] See Marquart, *Ērānšahr*, p. 223.

[6] See Chavannes, *Turcs occid.*, p. 71 note.

[7] See *ibid.*, pp. 164 sq.

spread everywhere. The land produces beans and corn; it favours trees and fruits; it produces excellent horses. The people's eyes show a greenish iris. . . . This territory is on the route which leads from the 'Four Garrisons' (or Chinese Turkestān) to the Tu-huo-lo (or Tokhāristān). At one time it was dependent on the Tibetans.'

Historical data of T'ang Annals.

It requires no detailed demonstration to recognize how closely the geographical data here furnished agree with Wakhān. The mention made of the great route leading through it and the reference to the Tibetan influence at one time exercised possess distinct historical interest. The capital *Sai-chia-shen* undoubtedly corresponds to the present Ishkāshim, a large group of villages on the western extremity of Wakhān.[8] The historical data which the T'ang Annals' notice furnishes, and of which a brief summary will suffice here, help to bring out on the one hand the hold exercised by the Chinese administration over Wakhān during the seventh and eighth centuries, and on the other the strong Turkish influence prevailing in the ruling family, probably through the close connexion with Badakhshān. When the territory in A.D. 656–60 was turned into a Chinese administrative district under the designation of *Niao-fei* with the king as prefect, his name is given with the Turkish title *Chieh-li-fa*. A string of Turkish names and titles is borne also by the king who is mentioned in A.D. 720 as receiving his brevet of investiture from the Emperor. Offerings of homage are recorded in the years A.D. 728 and 729, and in 741 the king Hu-chên-t'an came in person to the Imperial Court.

For the year A.D. 742 the encyclopaedia *Ts'ê fu yüan kuei* has preserved the text of a brevet issued by the Imperial chancellery to an envoy from Hu-mi or Wakhān, who had been sent by the son of the ruling chief to express his desire of breaking with the Tibetans.[9] From this it is clear that Tibetan aggression must have made itself felt on the uppermost Oxus years before Kao Hsien-chih started on his memorable expedition of 747 to close the Tibetan line of advance across the Darkōt and Barōghil Passes. Probably in consequence of this great success Hu-chên-t'an presented himself again at court in A.D. 749 and obtained the honour of a command in the Imperial guards. Even as late as 758 the visit of a Wakhān 'king' to the Imperial capital is recorded. That during this whole period Wakhān was directly dependent on Tokhāristān, just as in modern times it always shared the political fortunes of Badakhshān, is made evident by a petition which the brother of the Jabgu of Tokhāristān in A.D. 718 addressed to the throne and of which the text is preserved in the *Ts'ê fu yüan kuei*.[10] In this Hu-mi is distinctly claimed as one of the chiefships which for generations past have acknowledged the suzerainty of Tokhāristān.

Hsüan-tsang's name for Wakhān.

The same close connexion with Tokhāristān is reflected in the detailed account which Hsüan-tsang has left concerning Wakhān.[11] The identity of Wakhān with the territory of *Ta-mo-hsi-t'ie-ti* 達摩悉鐵帝, through which the pilgrim passed on his way from Badakhshān to the Pāmīrs and Sarīkol about A.D. 642, was recognized from the first by General Cunningham and accepted by all those who, like V. de Saint-Martin and Yule, followed him in the elucidation of this part of Hsüan-tsang's itinerary. Though a satisfactory explanation of the name Ta-mo-shih-t'ie-ti still remains to be sought,[12] its application to Wakhān is established beyond doubt by

[8] The identity of the names was first recognized by Marquart, *Ērānšahr*, p. 224. Most editions of the *T'ang shu* give the erroneous form *Han-chia-shen* 寒迦審; see Chavannes, *Turcs occid.*, p. 165.

[9] Cf. Chavannes, *Turcs occid.*, p. 212.

[10] See *ibid.*, p. 200.

[11] Cf. Julien, *Mémoires*, i. pp. 201 sqq.; Watters, *Yuan Chwang*, ii. pp. 279 sqq.

[12] For attempts to connect this name with Mastūj, see V. de Saint-Martin in Julien, *Mémoires*, ii. p. 425; Yule in *J.R.A.S.*, N.S. vi. p. 112; Marquart, *Ērānšahr*, p. 225. But there is no evidence that Wakhān or the uppermost part of it ever bore the name of **Darah-i-Mastūj* or **Dar-i-Mastūj*, as has been assumed. The use of this term would be particularly strange in the case of Hsüan-tsang, who did not even visit that part of the valley from which the route

the notice of the T'ang Annals already quoted and by a gloss of the *Hsi-yü-chi* which states that the indigenous name of the territory was *Hu-mi*. The same annotator also indicates as an alternative name *Chên-k'an* 鎮侃 or *Huo-k'an* 鑊侃. The latter form is found also in the notice, and may possibly be looked upon as another attempt to reproduce the name Wakhān.[13]

Hsüan-tsang's description of Wakhān.

'The kingdom of Ta-mo-hsi-t'ie-ti', thus the *Hsi-yü-chi* tells us,[14] 'is situated between two mountains; it is an ancient territory of the Tu-huo-lo (Tokhāra) kingdom. It is about fifteen or sixteen hundred li from east to west, and four or five li[15] from north to south, but in its narrowest part not above one li. It lies along the River Fu-ch'u (Oxus) 縛芻 of which it follows the windings. There are mounds and hills of different heights, and plains covered with sand and stones; an icy wind blows there. The only crops are wheat and pulse, and there is little vegetation.[16] This country produces excellent horses which, though small of size, stand long journeys with ease. Manners are not regulated by customs. The people are of a violent and coarse disposition; their appearance is common and ill-favoured; they wear woollen garments. For the most part they have greenish-blue eyes and thereby differ from other people. There are about ten convents, containing but a small number of monks.'

'Hun-t'o-to is the capital of the kingdom. In the centre of the town there rises a convent built by the first king of the country. For its construction the hill-side has been cut and a gully filled in. In the beginning when the kingdom had not yet received the doctrine of Buddha, the people sacrificed solely to evil spirits; but for some centuries past the beneficent influence of the Law has commenced to spread.' The pilgrim then relates at great length the pious legend about the Arhat who induced the king after his cherished son's death to adopt Buddha's teaching. He also describes the miracle observed in the great Vihāra of the convent where a canopy of gilt copper suspended above a stone statue of Buddha used to move with the worshipper as he circumambulated the image, and to stop when he stopped.

Correctness of Hsüan-tsang's description.

The physical features of the long and narrow valley of Wakhān, as shown by the map or described by modern travellers are here given with great accuracy. The length of the valley from east to west is, indeed, over-estimated, since the total marching distance from the Wakhjīr Pass down to Ishkāshim, even allowing for sinuosities of the track and the difficult ground above Sarhad, cannot exceed two hundred miles at the utmost. But the relative narrowness of the inhabitable strip of ground along the whole valley is well brought out, and it must be remembered that Hsüan-tsang had no opportunity to test personally the length of the main valley since his route across the Pāmīrs left it at Langar Kisht to ascend to Victoria Lake.[17] His description of the ground, confined, as usual with him, to the actual route, duly reflects the frequent interchange of shingle-covered fans, rocky undulations, and stretches of riverine sand with fields and meadow land.[18]

The people of Wakhān.

His remarks about the products of Wakhān still hold good. All observers agree that the strong wind that blows with little intermission throughout the winter and spring down the valley, influences unfavourably the climate and the growth of vegetation. Of the endurance shown by the small but wiry Wakhī ponies I had ample occasion to gather personal experience.[19] Constant

to Mastūj across the Barōghil branches off. That *Ta-mo-hsi-t'ie-ti* transcribes a Skr. **Dharmasthiti* is likely enough. But the origin of this name escapes us.

[13] Cf. Watters, *Yuan Chwang*, ii. p. 280.

[14] I follow Julien's translation, *Mémoires*, ii. pp. 201 sq., except where otherwise marked.

[15] Thus Watters; Julien by an oversight has 'quatre à cinq cents li'.

[16] Thus Watters; Julien has: 'On sème peu de blé et de légumes, et l'on cultive en quantité les fleurs et les arbres fruitiers.'

[17] Cf. *Ancient Khotan*, i. p. 30.

[18] I take my information from General Barrow's excellent *Gazetteer of the Eastern Hindu Kush*.

[19] Cf. *Desert Cathay*, i. pp. 72 sqq.

exposure to a harsh climate and the coarse dress prepared from the skins and fleece of the sheep which constitute the Wakhīs' sole riches, give the inhabitants of this bleak high-lying valley a hard, quasi-savage air. There can be little doubt that the people were in Hsüan-tsang's time, as now, of that fine Galcha stock representing the *Homo Alpinus* type which has held the western and southern slopes of the Pāmīrs from very early days.[20] The Wakhīs I saw, like the closely allied Sarīkolīs, showed all the physical characteristics of the Īrānian hill Tājiks in remarkable purity, an observation which the anthropometric records and photographs taken by me fully bear out.[21] Fair hair and blue eyes are very common among them, and this accounts for the special reference which Hsüan-tsang makes to the latter. Coming from the side of Kābul where the racial composition of the population must then have been strongly influenced by Indian elements, and through Tokhāristān, where the original Īrānian stock had during successive periods undergone a considerable admixture of Turkish and other foreign blood, the change in the appearance of the people after entering Wakhān must have been doubly striking to the pilgrim.

Old capital of Wakhān.

V. de Saint-Martin first recognized the identity of Hsüan-tsang's *Hun-t'o-to* 昏馱多 with the present *Khandūt*, a fairly large village some twenty miles below the confluence of the two branches of the Āb-i-Panja and still serving as the chief place for one of the four administrative divisions of Wakhān.[22] The importance of the position is marked by the ruins of an ancient fort, opposite the present fort-village, which Wood mentions; it is ascribed to pre-Muhammadan times and locally known as *Zamr-i-ātish-parast*.[23] The advantages here offered by plentiful cultivation and magnificent grazing-grounds are such that the present rulers of Wakhān are said to have contemplated at one time the removal of the seat of government from Kila Panja to Khandūt. Whether the place still retains traces of the Buddhist sanctuary mentioned in Hsüan-tsang's account only local investigation could prove.

Wu-kung's passage through Wakhān.

The last Chinese notice of Wakhān during T'ang times is due to Wu-k'ung who, coming from Kāshgar in A.D. 751, passed through the district on his way to Chü-wei or Mastūj. Laconic, as is his wont, the pilgrim confines himself to the mere mention of the 'kingdom of Hu-mi' 護密, which he reached after successively crossing 'the Onion Mountains' (Ts'ung-ling), 'the passes of *Yang-yü*' and 'the kingdom of the five *Ch'ih-ni* (or *Shih-ni*) of the valley of *Po-mi*'.[24] By the last named undoubtedly the Pāmīrs are meant, and the mention made with them of 'the kingdom of the five Ch'ih-ni (or Shih-ni)', i.e. Shighnān,[25] probably merely indicates that they were then reckoned as belonging to that hill chiefship on the Oxus. The aggressive strength of the hardy mountaineers of Shighnān, which asserted itself down to modern times in frequent raids across the Pāmīrs, is duly noted in the T'ang Annals' account of Shih-ni and in Hsüan-tsang's description of Shih-ch'i-ni.[26] The reference to the Ts'ung-ling Mountains clearly shows that Wu-k'ung's route lay across Sarīkol, whence he is likely to have reached Wakhān by way of the Naiza-tāsh Pass (Yang-yü ?) and the Great Pāmīr.

Marco Polo's account of *Vokhan*.

After Wu-k'ung's narrative of his journey the Chinese sources of information about the Pāmīrs and the adjoining regions run dry for nearly a thousand years. But that the routes leading across them from Wakhān retained their importance also in Muhammadan times is attested by the

[20] Cf. for references to the Galchas and their cognates further east, *Ancient Khotan*, pp. 144 sqq.

[21] See now Mr. Joyce's *Notes*, &c. in *J. Anthrop. Inst.*, xlii. p. 467.

[22] See Julien, *Mémoires*, ii. p. 425.

[23] Cf. Wood, *Source of the Oxus*,[2] p. 218, where the name of the village is given as *Kundut*.

[24] See Chavannes et Lévi, *L'Itinéraire d'Ou-k'ong*, pp. 10 sq. (*J. as.*, 1895, t. vi. pp. 346 sqq.)

[25] Cf. for this certain identification Chavannes, *Turcs occid.*, p. 162, where the full account of this territory forming the northern neighbour of Wakhān is reproduced from the T'ang Annals.

[26] Cf. for Hsüan-tsang's account of Shighnān and its troublesome people, Julien, *Mémoires*, ii. pp. 205 sq.; Watters, *Yuan Chwang*, ii. p. 281.

greatest of mediaeval travellers, Marco Polo. I have already in *Ancient Khotan* discussed the portion of his itinerary which deals with the journey across the Pāmīrs to 'the kingdom of Cascar' or Kāshgar,[27] and it only remains here to note briefly what he tells us of the route by which he approached them from Badakhshān.[28] 'In leaving Badashan you ride twelve days between east and north-east, ascending a river that runs through land belonging to a brother of the Prince of Badashan, and containing a good many towns and villages and scattered habitations. The people are Mahommetans, and valiant in war. At the end of those twelve days you come to a province of no great size, extending, indeed no more than three days' journey in any direction, and this is called VOKHAN. The people worship Mahommet, and they have a peculiar language. They are gallant soldiers, and they have a chief whom they call NONE, which is as much as to say *Count*, and they are liegemen of the Prince of Badashan.'

Sir Henry Yule was certainly right in assuming that 'the river along which Marco travels from Badakhshan is no doubt the upper stream of the Oxus, known locally as the Panja. . . . It is true that the river is reached from Badakhshan proper by ascending another river (the Vardoj) and crossing the Pass of Ishkáshm, but in the brief style of our narrative we must expect such condensation.'[29] Marco's great commentator was guided by equally true judgement when he recognized in the indications of this passage the same system of government that prevailed in the Oxus valleys until modern times. Under it most of the hill tracts dependent on Badakhshān, including Ishkāshim and Wakhān, were ruled not direct by the Mīr, but by relations of his or hereditary chiefs who held their districts on a feudal tenure. The twelve days' journey which Marco records between Badashan and 'Vokhan' are, I think, easily accounted for if it is assumed that the distance from capital to capital is meant; for twelve marches are still allowed for the distance from Bahārak, the old Badakhshān capital on the Vardōj, to Kila Panja.

Marco Polo's route across Pāmīrs.

That Kila Panja was in Marco's days, as at present, the chief place of Wakhān is indicated also by his narrative of the next stage of his journey. 'And when you leave this little country, and ride three days north-east, always among mountains, you get to such a height that 'tis said to be the highest place in the world! And when you have got to this height you find a great lake between two mountains, and out of it a fine river running through a plain. . . . The plain is called PAMIER.' The bearing and descriptive details here given point clearly to the plain of the Great Pāmīr and Victoria Lake, its characteristic feature. About sixty-two miles are reckoned from Langar-kisht, the last village on the northern branch of the Āb-i-Panja and some six miles above Kila Panja, to Mazār-tapa where the plain of the Great Pāmīr may be said to begin, and this distance agrees remarkably well with the three marches mentioned by Marco.

Subdivisions of Wakhān.

His description of Wakhān as 'a province of no great size, extending indeed no more than three days' journey in any direction' suggests that a portion of the valley must then have formed part of the chiefship of Ishkāshim or Zebak over which we may suppose 'the brother of the Prince of Badashan' to have ruled. Such fluctuations in the extent of Wakhān territory are remembered also in modern times. Thus Colonel Trotter who visited Wakhān with a section of the Yārkand Mission in 1874, distinctly notes that 'Wakhān formerly contained three "Sads" or hundreds, i. e. districts, containing a hundred houses each' (viz. Sad-i-Sar-hadd, Sad Sipanj, Sad Khandūt).[30] To these Sad Ishtragh, the tract extending from Dīgargand to Ishkāshim, is declared to have been added in recent times, having formerly been an independent principality. It only remains to note that Marco was right, too, in his reference to the peculiar language of Wakhān; for Wakhī—which is spoken not only by the people of Wakhān but also by the numerous Wakhī colonists spread

[27] See *Ancient Khotan*, i. pp. 41 sq.

[28] Cf. Yule, *Marco Polo*, i. pp. 170 sq.

[29] See *ibid.*, p. 172.

[30] See *Yarkand Mission Report*, p. 276.

through Mastūj, Hunza, Sarīkol, and even further east in the mountains—is a separate language belonging to the well-defined group of Galcha tongues which itself forms the chief extant branch of Eastern Īrānian.[31]

Section II.—HISTORICAL SITES IN WAKHĀN

Ancient remains of Wakhān.

In my personal narrative I have fully explained the reasons which made it impossible for me to descend the Oxus below Sarhad, however strongly I felt attracted by the fascinating regions lower down its course upon which my eyes had been fixed since early youth.[1] Thus it must be reserved for future chance to supplement this chapter by a systematic survey of the antiquities of Wakhān. That there are remains sufficiently conspicuous to attract the attention even of the passing traveller is clear from the mention which Wood and later visitors make of 'three Kaffir forts, which the natives believe to have been erected by the Guebers or Fire-worshippers'.[2] One of them, known as Zamr-i-Ātish-parast, opposite Khandūt, I have already had occasion to mention. The others, Zangibar, a short distance above Kala-Panja, and Kala-i-Kāka, close to Ishtragh, are also both situated on the right, now Russian, bank of the Oxus, a circumstance which gives hope that their examination by some competent archaeologist will be not long delayed.[3]

Kao-Hsien-chih's victory near Sarhad.

But if access to the main parts of Wakhān was thus barred to me, I had at least the satisfaction of making a rapid survey of that ground which, as far as our extant records go, has most claim in Wakhān to be considered an interesting historical site. I mean the position south of Sarhad where the Chinese general, Kao Hsien-chih, in A.D. 747 gained his signal victory over the Tibetan force defending the approach to the route across the Barōghil and Darkōt. Since I have already discussed at length the general course of that memorable expedition and the routes by which the Chinese leader had concentrated his forces across the Pāmīrs for the capture of the route leading to Yasīn,[4] we may at once proceed to the consideration of the account of the battle, with its topographical details which Kao Hsien-chih's biography in the T'ang Annals furnishes.[5]

Account of battle in T'ang Annals.

The three Chinese columns operating, as I have shown, from the west, north, and east, 'had agreed to effect their junction on the thirteenth day of the seventh month (August) between seven and nine o'clock in the morning at the Tibetan stronghold of Lien-yün. In that stronghold there were a thousand soldiers; moreover, at a distance of fifteen li to the south of the rampart, advantage had been taken of the mountains to erect palisades behind which there were eight to nine thousand troops. At the foot of the rampart there flowed the river of the valley of P'o-lê 婆勒 which was in flood and could not be crossed. Kao Hsien-chih made an offering to the river of three victims; he directed his captains to select their best soldiers and their best horses; each man carried rations of dry food for three days. In the morning they assembled by the river bank. As the waters were difficult to cross, officers and soldiers all thought the enterprise senseless. But when the other river bank was reached neither had the men wetted their standards nor the horses their saddle-cloths. After the troops had crossed and formed their ranks, Kao Hsien-chih, overjoyed, said to Pien Ling-ch'êng (the Imperial Commissioner): "For a moment, while we were in the midst of the passage, our force was beaten if the enemy had come. Now that we have crossed and formed ranks, it is proof that Heaven delivers our enemies into our hands." He at once ascended the mountain

[31] For the linguistic relationship of Wakhī, cf. Geiger in *Grundriss der Iran. Philologie*, Bd. I. pt. ii. pp. 290 sqq.

[1] See *Desert Cathay*, i. pp. 67 sq.

[2] See Wood, *Source of the Oxus*, p. 218.

[3] Some account of these three strongholds is given by Lieut. Olufsen, *Through the Unknown Pamirs*, pp. 173 sqq. Their extent and solid construction are well shown, but no clear data are furnished as to their origin and age. The connexion assumed with some invasion of the Siāh-pōsh Kāfirs is, historically, very improbable.

[4] Cf. above, pp. 53 sqq.

[5] See Chavannes, *Turcs occid.*, p. 152, note 1.

and engaged in a battle which lasted from the *ch'ên* period (7–9 a.m.) to the *szŭ* period (9–11 a.m.). He inflicted a great defeat upon the barbarians, who fled when the night came. He pursued them, killed 5,000 men and made 1,000 prisoners; all the rest dispersed. He took more than 1,000 horses, and warlike stores and arms beyond counting.'

Lien-yün located near Sarhad.

The analysis given above of the routes followed by the Chinese columns and of Kao Hsien-chih's three days' march to Mount T'an-chü, or the Darkōt, confirms M. Chavannes in locating the Tibetan stronghold of Lien-yün 連雲堡 near the present Sarhad.[6] It is equally clear from the description of the river crossing that the Chinese concentration must have taken place on the right or northern bank of the Āb-i-Panja, where the hamlets constituting the present Sarhad are situated, while the stronghold of Lien-yün lay on the opposite left bank. Already, when briefly discussing the record of the expedition in *Ancient Khotan*, I had expressed the belief that the position taken up by the Tibetan main force, fifteen li to the south of Lien-yün, must be looked for in the valley which debouches on the Āb-i-Panja opposite to Sarhad and leads due south up to the Barōghil and Shawitakh Passes.[7] I also surmised that the Chinese general, apart from the confidence aroused by the successful river crossing, owed his victory mainly to a flanking movement by which his troops gained the heights and thus successfully turned the fortified line behind which the Tibetans were awaiting them.

The defile Pitkhar.

This opinion was confirmed by what I saw of the valley leading to the Oxus on my descent from the Barōghil on May 19, and by the examination I was able to make two days later of the mountain-side flanking its debouchure from the west.[8] The valley into which the route leads down from the Barōghil is quite open and easy about Zartighar, the southernmost hamlet. There a ruined watch-tower shows that defence of the route had been a concern also in modern times. Further down the valley-bottom gradually contracts, though still offering easy going, until, from a point about two miles below Zartighar to beyond the scattered homesteads of Pitkhar,[9] its width is reduced to between one-half and one-third of a mile. On both sides this defile is flanked by high and very precipitous rocky ridges, the last offshoots of spurs which descend from the main Hindukush water-shed. These natural defences seemed to provide just the kind of position which would recommend itself to the Tibetans wishing to bar approach to the Barōghil, and thus to safeguard their sole line of communication with the Indus Valley. The width of the defile would account for the relatively large number of defenders recorded by the Chinese Annals for the enemy's main line; the softness of the ground at its bottom, which is almost perfectly level, covered with fine grass in the summer, and distinctly swampy in the spring owing to imperfect drainage, would explain the use of palisades, at first sight a rather strange method of fortification in these mountains.[10] Finally the position seemed to agree curiously well with what two historical instances of modern times,

[6] See Chavannes, *Turcs occid.*, p. 154, note *d*; also above, pp. 53 sqq.

[7] Cf. *Ancient Khotan*, i. p. 9.

[8] Cf. the description of these marches in *Desert Cathay*, i. pp. 64 sq., 70 sqq.

[9] Thus I heard the name of the little hamlet. The Trans-frontier map spells it as *Pirkhor*; General Barrow as *Pírkár*.

[10] In my note of *Ancient Khotan*, p. 9, I ventured to suggest that, considering how scanty timber must at all times have been about Sarhad, there was some probability that walls or Sangars constructed of loose stones were really meant by the 'palisades' mentioned in the translation of the passage from the T'ang Annals.

This suggestion illustrates afresh the risk run in doubting the accuracy of Chinese records on quasi-topographical points without adequate local knowledge. On the one hand I found that the peculiar nature of the soil in the defile would make the construction of heavy stone walls inadvisable if not distinctly difficult. On the other, my subsequent march up the Āb-i-Panja showed that, though timber was as scarce about Sarhad itself as I had been led to assume, yet there was abundance of willow and other jungle in parts of the narrow river gorge one march higher up near the debouchure of the Shaor and Bahārak streams. This could well have been used for palisades after being floated down by the river.

the fights in 1904 at Guru and on the Karo-lā, had revealed as the typical and time-honoured Tibetan scheme of defence — to await attack behind a wall erected across the open ground of a valley.[11]

Heights flanking Pitkhar defile.

There remained the question whether the defile of Pitkhar was capable of being turned by an attack on the flanking heights such as the Chinese record seemed plainly to indicate. The possibility of such a movement on the east was clearly precluded by the extremely precipitous character of the flanking spur, and still more by the fact that the summer flood of the Āb-i-Panja in the very confined gorge above Sarhad would have rendered that spur inaccessible for the Chinese operating from the northern bank of the river. All the greater was my satisfaction when I heard from my Wakhī informants of ruins of an ancient fort, known as *Kansir*, and situated on the precipitous crest of the flanking spur westwards, almost opposite to Pitkhar. During the single day's halt, which to my regret was all that circumstances would allow me at Sarhad, I was kept too busy otherwise to make a close inspection of the ground where the Tibetan post of Lien-yün might possibly have been situated. Nothing was known to the well-informed and obliging Sarkad Ak-sakāl, Mubārak Shāh, or other local informants about old remains on the open and partly water-logged plain which adjoins the river at the mouth of the valley coming from the Barōghil; nor were such likely to have survived long on ground which was liable to inundation from the Oxus, flowing in numerous shifting channels with a total width of over a mile. Yet the Annals distinctly tell us that 'at the foot of the rampart [of Lien-yün] flowed the river of *P'o-lê* Valley'.[12]

The Oxus ford at Sarhad.

Even if the exact position of Lien-yün remained undetermined, my short stay at Sarhad sufficed to convince me how closely local conditions agreed with the details of Kao Hsien-chih's exploit in crossing the Oxus. The river at the time of the summer flood must, indeed, present a very imposing appearance as it spreads out its waters over the wide valley-bottom at Sarhad. But the very separation of the waters makes fording always possible even at that season, provided the passage takes place in the early morning, when the flood due to the melting snow and ice is temporarily reduced by the effect of the night's frost on the glaciers and snow-beds at the head of the Āb-i-Panja. The account in the Annals distinctly shows that the river passage must have been carried out at an early hour of the morning, and thus explains the complete success of an otherwise difficult operation.

Ascent to Kansir Fort.

I was able to trace the scene of the remaining portion of the Chinese general's exploit when, on May 21, I visited the ruined fortifications reported on the steep spur overlooking the debouchure of the Barōghil stream from the west. After riding across the level plain of sand and marsh and then along the flat bottom of the Pitkhar defile for a total distance of about three miles, we left our ponies at a point a little to the south of some absolutely impracticable rock faces which overlook Pitkhar from the west. Then, guided by a few Wakhīs, I climbed with Naik Rām Singh to the crest of the western spur, reaching it only after an hour's hard scramble over steep slopes of rock

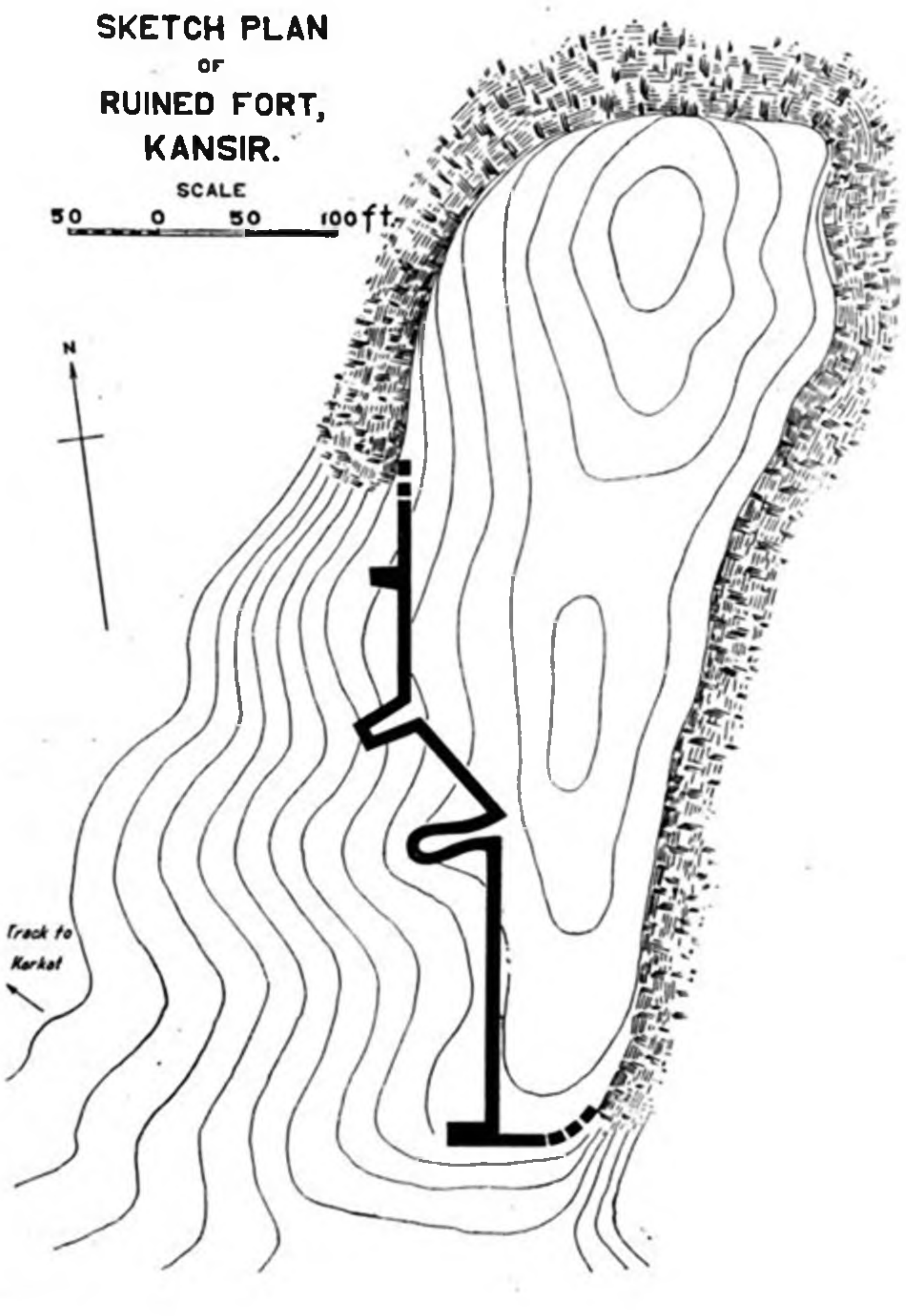
11 In *Ancient Khotan*, i. p. 9, I have already called attention to the curious parallel to the battle above Lien-yün presented by the attempts which Tibetan strategy made in 1904 to bar the advance of the Tibet Mission Force. Both at Guru and on the Karo-lā the relatively large Tibetan force was content to hold the open ground of the valley in strength, taking up its position behind stone walls, while leaving it free to their opponents to occupy the commanding heights. The bravery with which the frontal attack was faced could not avail under such conditions to avert disaster.

12 This name *P'o-lê* 婆勒 is, as M. Chavannes has pointed out, *Turcs occid.*, p. 154, identical with *So-lê* 娑勒 which figures as a town in Hu-mi or Wakhān, *ibid.*, p. 150, and also (in the form of *So-lê-so-ho*) as the head-quarters of the Po-ho district in the list of administrative divisions established after A. D. 658 (see above, p. 61). The two initial characters 婆 and 娑 are often confused in Chinese texts. The form *So-lê* might, perhaps, be an attempt to reproduce the first part of *Sarūgh-Chupān*, an old designation of the Sarhad tract which is found already in the *Tārīkh-i-Rashīdī*, pp. 354 sq.

and shingle. There, beyond a stretch of easily sloping ground and about 300 feet higher, rose the old fort of Kansir at the extreme north end of the crest. Between the narrow ridge occupied by the walls and bastions and the continuation of the spur south-westwards a broad dip seemed to offer an easy descent towards the hamlet of Karkat on the Oxus.[13]

Wall ruins at Kansir.

It was clearly for the purpose of guarding this approach that the little fort had been erected on this exposed height. On the north and east, where the end of the spur falls away in unscalable cliffs to the main valley of the Oxus and towards the mouth of the Pitkhar defile, some 1,600–1,700 feet below, structural defences were needless. But the slope of the ridge facing westwards and the narrow neck to the south had been protected on the crest by a bastioned wall for a distance of about 400 feet (see plan). Three bastions facing west and south-west, and one at the extreme southern point, still rose, in fair preservation in parts, to a height of over 30 feet. The connecting wall-curtains had suffered more, through the foundations giving way on the steep incline. Of structures inside the little fort—if the limited ground, not quite 200 feet at its widest, and the rocky surface had ever admitted of such—there remained no trace.



Construction of walls.

The ruined fortification bore a distinctly old appearance, but the only definite antiquarian indication was supplied by the construction of the walls. Outside a core of closely-packed rough stones, they showed throughout a solid brick facing 4 feet to 6 feet in thickness, with regular thin layers of brushwood separating the courses of sun-dried bricks. The size of the bricks, about 8 inches by 7 inches and 4 inches thick, furnished no chronological evidence. But in the systematic use of the brushwood layers I could not fail to recognize a peculiarity with which ancient Chinese construction in the Tārīm Basin had already made me familiar, and which I was subsequently to trace right to the westernmost confines of China proper. It was no doubt intended to assure greater consistency, particularly under climatic conditions of particular dryness. As my subsequent explorations around Lop-nōr and on the Tun-huang Limes proved, it must have been used from the very commencement of Chinese expansion into Central Asia. But my later discoveries at Mīrān and on Mazār-tāgh have shown also that the Tibetan invaders of the T'ang period, when building their own forts, did not neglect to copy this constructive expedient of their Chinese predecessors and opponents in these regions. So, in the absence of other remains, this archaeological indication by itself is not decisive as to whether the construction of the Kansir walls was due to the Tibetan invaders of Wakhān, or to the Chinese during the few years after Kao Hsien-chih's expedition when they held the route leading to 'Little P'o-lü', or Yasīn, and to the Indus.

Purpose of Kansir Fort.

On the whole, topographical considerations make me inclined to favour the first supposition. The ascent from the Pitkhar defile is so steep that troops holding the crest of the spur against an

[13] In the Trans-frontier map the name appears as *Kharkal*.

enemy coming from the Barōghil side would not need the defence of walls to beat off an attack. Nor would the fortified ridge of Kansir be tactically suited for this purpose, the crest line further south furnishing a far stronger position. It is different if an attack from the side of the Oxus had to be resisted, for in this case the Kansir ridge facing west would serve as a very convenient position on the flank to command the route which leads up from Karkat, before it attains the easy sloping ground further south on the top of the spur. If we accept this indication, which the ground itself offers, there still remains the doubt as to whether the Kansir Fort already existed when Kao Hsien-chih carried the Tibetan main position by an attack on its mountain flank, or whether it was erected by the Tibetans when they returned after the final retirement of the Chinese some years later, and were, perhaps, anxious to guard against any repetition of the successful move which had outflanked a favourite defensive position.

Old cultivation near Langar.

In Chapters VII and VIII of my personal narrative I have described the marches which carried me from Sarhad to the Little Pāmīr, and thence, by May 27, to the true source of the Oxus and the Wakhjīr Pass on the watershed between Oxus and Tārīm. The interest which this route across the Pāmīrs presents for historical geography has been previously discussed by me.[14] Opportunity for archaeological observations was afforded only at two points, both near the second halting-stage above Sarhad, known as *Langar*. The little mud-domed structure to which the place owes its name, meaning 'rest-house' in Turkī, showed no special sign of age. But before approaching Langar I noticed in at least three places that small alluvial plateaus on the right river bank bore marks of having once been levelled for fields.[15] The Wakhīs from Sarhad were well aware of these signs of earlier settlements, and attributed their desertion to the increasing cold of this region. But, considering that the climate at an elevation of close on 12,000 feet above sea level must always have been rigorous, it seems reasonable to suppose that the former occupation may have been due to greater pressure of population in Wakhān, and also to the far larger traffic which once passed by this route between the Oxus and Tārīm Basins. I have already pointed out elsewhere how much the presence of permanent habitations on the Āb-i-Panja, as high up as Langar and again from Dafdār downwards on the side of the Tāghdumbāsh Valley, must have favoured the use of the route along the uppermost Āb-i-Panja Valley and across the Wakhjīr Pass for regular caravan traffic.[16]

Ruin of Kārwān-balasi.

An object of real archaeological interest presented itself on the next march, which led from Langar to Bozai-gumbaz. We had covered some ten miles across the low saddle, known as Dasht-i-Mīrzā Murād, and over narrow alluvial plateaus, when I first caught sight of the Little Pāmīr from a small spur of the rolling downs, and, after a short distance, approached the well-preserved little structure known as *Kārwān-balasi* (Fig. 4). A local tradition, of which I had already heard, believes it to have been built as a tomb for a merchant's son who had died here in old times, and thus accounts for the name. The ruin is small, indeed, but in such a locality is bound to attract attention by its manifest age and solidity of construction. It consists of a rectangular cella measuring outside in ground-plan 10 feet on the north-east and south-west faces, and 9 feet on the other two. This is solidly built of slabs set in mortar, and at a height of about 12 feet is surmounted by the scanty remains of a dome. The interior shows a small cella, 5 feet by $4\frac{1}{2}$ feet, with an entrance 2 feet wide on the north-east. Commencing at a height of $5\frac{1}{2}$ feet from the floor, the cella walls are reduced by means of gradually projecting horizontal courses to form a dome.

Resemblance to Thōl Stūpa.

Outside I was struck at once by the division of the cella walls into three well-defined stories, which, together with the boldly projecting cornices surmounting and dividing them, measure suc-

[14] See *Ancient Khotan*, i. pp. 23, 32; also above, p. 60.

[15] Cf. also Gordon, *Roof of the World*, p. 129.

[16] See *Ancient Khotan*, i. p. 33.

cessively upwards 4 feet, $4\frac{1}{2}$ feet, and $3\frac{1}{2}$ feet. The construction in stories, the surmounting dome, and the character of the rough but solid masonry at once recalled to my mind the closely corresponding features of the little Stūpa of Thōl, the last Buddhist remains I had seen in 1900 south of the Hindukush when approaching the Pāmīrs through Hunza.[17] There it was an unmistakable Stūpa base, 10 feet square in ground-plan, which showed these successive stories and cornices with heights of 3 feet 9 inches, 3 feet 9 inches, and 3 feet 10 inches respectively. This similarity of constructive features distinctly suggests pre-Muhammadan origin for the Kārwān-balasi ruin, and this assumption finds further support in the horizontal construction of the interior dome and of the arch above the narrow entrance (see Fig. 4). Misled by the present local tradition and the apparent orientation towards the Qibla, which the south-west bearing of the cella wall facing the entrance suggested, I had been inclined at first to look upon the ruined cella as an adaptation to Muhammadan use of an ancient architectural model of Buddhism.[18] But further consideration makes it appear to me far more probable that the ruin goes back to pre-Muhammadan times, and had originally served as a small Buddhist Vihāra.

Muhammadan interpretation of ruin.

The very orientation, in fact, on which my first conjecture relied, seems to exclude the use of the structure as a Muhammadan tomb; for within the narrow space its interior affords it would be impossible to give to a buried body the position, with the feet laid due south, which orthodox Muhammadan custom demands. This consideration must be held in all probability to account for the fact, subsequently tested at several Muhammadan burial-grounds of old date in the Tārīm Basin, such as at the ruins near the Charchan and Inchike Rivers,[19] that the ruined tombs examined were invariably orientated towards the cardinal points. Yet, after the many examples recorded both in *Ancient Khotan* and in the present work of earlier local worship continued with due adaptation into Muhammadan times,[20] there can be nothing to cause surprise in the interpretation which later tradition placed upon the ruin as a Muhammadan tomb. Local worship was bound to linger on in the case of a ruin which, however small its size, was conspicuous in a region so devoid of permanent structures as the Pāmīrs, and given its appearance, so like the 'Gumbaz' or dome customary in Central Asia, especially with the Kirghiz, no explanation could be more appropriate than that it was a tomb. Local tradition was not likely to trouble itself much about the difference in orientation, and for the strangely small interior of the supposed burial-chamber it could readily find an explanation by representing it as that of a child, a fact which accounts for the name Kārwān-balasi, 'the son of the caravan[-leader]'.

Kārwān-balasi ruin a small Vihāra.

If we assume the ruin to be that of a small Vihāra, or chapel, intended to shelter some sacred Buddhist image, there is no difficulty whatever in accounting for its architectural features. The ground-plan and elevation agree well with what M. Foucher's lucid analysis has proved to be the typical construction of Buddhist Vihāras in Gandhāra and elsewhere on the north-western confines of India.[21] The interior dome and superimposed cupola are there regular features, and even analogies to the threefold division of the outer walls, with cornices, can be found in various Vihāra models represented in relievo sculptures.[22] Nor does the narrow space of the cella interior present anything peculiar, seeing that these Buddhist Vihāras in India were very often, if not ordinarily, intended for the reception of a single image only, and that at the great Takht-i-Bahī convent even the largest of

[17] See *Ancient Khotan*, i. p. 20, Fig. 4.

[18] See *Desert Cathay*, i. p. 77.

[19] See below.

[20] Cf. for references *Ancient Khotan*, i. p. 611, s. v. *local worship*; above, p. 41, and below, sec. iii.

[21] Cf. Foucher, *L'Art du Gandhâra*, i. pp. 120 sqq.

[22] Cf. *ibid.*, particularly Figs. 41, 42. The two lower stories of the Kārwān-balasi ruin evidently correspond to the two-storied base of the interesting Vihāra model shown in Fig. 41, the third to the square shrine itself. This architectural arrangement may have been influenced also by the analogy of the threefold base always placed below the Stūpa dome.

the chapels surrounding the main Stūpa court do not show cella interiors much exceeding six feet on each side.[23]

'Hall of the red Buddha' identified.

It only remains to see whether we cannot trace some earlier mention of this structure, the pre-Muhammadan origin of which has thus become highly probable. On ground so exceptionally bare of permanent structures as the Pāmīrs, this solidly built little shrine, insignificant as its size is, must have had a far better chance of attracting notice than it would have anywhere in regions crossed by regular routes. Now, when discussing above the several routes by which Kao Hsien-chih moved his three columns to their concentration before Sarhad, I have already shown that one of them, described as the route of 'the hall of the red Buddha' (*Ch'ih-fo-t'ang*), must have led down the valley of the Āb-i-Panja from the Wakhjīr or the Little Pāmīr.[24] I have also explained why collateral evidence connected with Kao Hsien-chih's return journey from Little P'o-lü to Sarhad led me to look for the spot that gave its name to the route in the vicinity of the point where the route down the Āb-i-Panja Valley is joined from the south by that which descends from the Khora-bohrt and Irshad Passes leading towards Gilgit and Hunza respectively. This point on the Dasht-i-Mīrzā Murād is not more than two or three miles distant from Kārwān-balasi, and the identity of the latter ruin with the *Ch'ih-fo-t'ang* of the Chinese record becomes still more probable on taking into account that the term 堂 *t'ang*, translated above after M. Chavannes' version by 'hall', is regularly applied also to Buddhist Vihāras or chapels, however small.[25] The reason for the erection at this particular spot of the Kārwān-balasi shrine or the 'Chapel of the red Buddha', as I take it, can no longer be conjectured after the lapse of ages. But that this little chapel should have given its name to the locality, and through this to the route leading past it, is fully in keeping with the use which modern local nomenclature on the Pāmīrs makes of the few artificial landmarks which that desolate region affords.[26]

SECTION III.—ON HSÜAN-TSANG'S ROUTE TO KĀSHGAR

Journey through Sarīkol.

After crossing, on May 27, the Wakhjīr Pass, under difficulties which my personal narrative describes,[1] I found myself on Chinese soil and at the head of that great Sarīkol Valley with which my first journey had already rendered me familiar. As my route down to Tāsh-kurghān was necessarily the same as the one I followed in July, 1900, and as the early geography, history, and antiquities of Sarīkol have already been fully discussed by me in *Ancient Khotan*,[2] it will suffice here to supplement that account by the survey of two old sites which I was now for the first time able to visit in person. The record of the ancient local traditions relating to both these sites is due to Hsüan-tsang, who, on his return journey about the summer of A. D. 642, passed from Wakhān across the Great Pāmīr to the Tāghdumbāsh Pāmīr and thus down to Tāsh-kurghān, the Sarīkol capital.[3]

Hsüan-tsang's legend about Sarī-kol royal family.

The story of the first of the sites is told by the pilgrim in connexion with the origin of the royal family of Chieh-p'an-t'o or Sarīkol.[4] 'The king gives himself the title of *Chih-na-t'i-p'o-ch'ü-tan-lo* (*Cīna-deva-gotra*), meaning the descendant of China and the sun-god. Formerly the country was

[23] Cf. Foucher, *L'Art du Gandhâra*, i. p. 124.

[24] See above, p. 54.

[25] This use of the term is well illustrated by the name *Ch'ien-fo-t'ang*, borne by the agglomeration of Buddhist cave temples, big and small, 'The halls of the Thousand Buddhas', at the famous site south-east of Tun-huang; see below.

[26] Thus, some six miles above Kārwān-balasi, *Bōzai-gumbaz*, a widely known local name, is derived from the poorly built tomb of a Kirghiz chief who was killed here about 1845 by Kanjūtī raiders. Compare also *Abdullah Khān*, i. e. his tomb, on the Alichur Pāmīr; *Mazār-tepe* and *Yol-mazār*, both tombs, on the Great Pāmīr, etc.

[1] See *Desert Cathay*, pp. 83 sqq.

[2] See *Ancient Khotan*, i. chap. II (pp. 22–40).

[3] Cf. *ibid.*, i. pp. 30 sqq.

[4] Cf. Julien, *Mémoires*, ii. pp. 210 sqq.; Watters, *Yuan Chwang*, ii. pp. 285 sqq.; *Ancient Khotan*, i. p. 34.

a desert valley in the midst of the Ts'ung-ling Mountains. At this time the king of P'o-la-szŭ (Persia) took a wife from the Han country (China). She had been met at this point by an escort on her progress, when the roads east and west were stopped by military operations. On this they placed the king's daughter on a solitary mountain peak, very high and dangerous, which could be approached only by ladders, up and down; moreover they surrounded it with guards both day and night for protection. After three months the disturbances were quelled. Quiet being restored, they were about to resume their journey when the lady was found *enceinte*.' Thereupon the king's envoy held council with his companions how to meet the consequences of this disgrace. From an attendant he learned that a divine person, coming on horseback from the sun's disc, every day at noon visited the princess. Afraid of the punishment awaiting him on return to his own country, the envoy decided to seek safety by remaining and gaining time. He then established the princess as ruler of the country. In due time she bore a son of great beauty and miraculous powers, who became a powerful king and was claimed as ancestor by the royal family of Sarīkol in Hsüan-tsang's time.

Modern legend of Kiz-kur-ghān.

That this legend was widely spread and firmly rooted in popular belief is proved by the unmistakable trace of it surviving in local tradition to-day. Already in 1900 I had heard, but too late for a visit, of remains of ancient walls perched on precipitous cliffs opposite to the fortified post of Ghujak-bai where the Tāghdumbāsh River makes its sharp bend to the north. To them clings a story known to Sarīkolīs and Kirghiz alike that King Naushīrwān, an ancient Persian ruler, had once placed there his daughter for safety. This is held to account for the popular designation of the ruins, *Kiz-kurghān*, meaning in Turkī 'the tower of the daughter (or princess)'. This story was plainly a genuine relic of the fuller tradition current in Hsüan-tsang's days, and I was therefore eager to use my march on May 30, from Payik down to Pisling, for a survey of the site and ruins where it is still localized.

Traces of old cultiva-tion.

But even before reaching them I was able to make a local observation of quasi-antiquarian interest; for at the foot of the spur known as *Koshun-kör*, near a small natural grotto, where we crossed to the left bank of the river, some six miles below Payik Karaul, I came upon ground showing marked traces of old cultivation in the shape of terraced fields and irrigation channels (*arik*). Part of the old arable land here was said to have been reoccupied by Wakhī settlers in recent times, but again abandoned. Also on the opposite right bank a considerable area was declared by my local guides to bear signs of ancient cultivation. These proofs of earlier occupation, fully ten miles higher up the valley than Pisling and Dafdār, where cultivation at present commences, have a special interest with reference to the advantages offered by the Tāghdumbāsh Pāmīr as a route for caravan traffic between Wakhān and Sarīkol.[5]

Position of Kiz-kur-ghān ruins.

About two miles below Koshun-kör the bold cliffs of Kiz-kurghān came in sight, almost facing the deserted post (*karaul*) of Ghujak-bai at the junction of the Tāghdumbāsh and Khunjerāb Rivers. The ruins proved to be situated on the extreme eastern end of a high and rugged spur which descends from the main Sarīkol range in a south-easterly direction to the Tāghdumbāsh River, exactly at the entrance of the narrow defile extending from Ghujak-bai to Dafdār (see Plate 3). The end of the spur, as we approached it from the south along the steeply cut river bank, presents itself as an almost isolated rock promontory falling away in nearly perpendicular cliffs on the south and east, with its top ridge rising some 700 feet above the river (Fig. 27). Our subsequent survey showed that equally unscalable rock walls protect it on the north and west towards the narrow and wildly twisting valley known as Kiz-kurghān Jilga.

Ascent to Kiz-kur-ghān.

The only approach to this frowning rock fastness lies over a low and narrow neck connecting it with the spur behind, and to this I climbed up with the Surveyor and Naik Rām Singh with con-

[5] Cf. *Ancient Khotan*, i. pp. 32 sq.; also above, p. 70.

siderable difficulty. The ascent led first up steep talus slopes and then through a still more precipitous couloir of rock débris. The young guide accompanying us had never ascended before, superstitious fears keeping Sarīkolīs in general from visits to the ruins. Plentiful pieces of ancient-looking juniper wood (*archa*) strewed the higher slope, and allowed me to guess the construction of the old walls of which I caught glimpses above us, long before the height was gained. After reaching the neck, only fifteen to twenty feet broad and some fifty to sixty yards long, we had still to clamber up a height of about a hundred and fifty feet over an equally narrow *arête*, and then I found my antiquarian surmise verified; for the old walls rising before us (Fig. 28), along what proved the south-west rim of the highest of the series of terraces forming the top of the promontory, showed, as expected, the curious structural peculiarity of twigs and brushwood embedded in regular layers between courses of sun-dried bricks.[6] A massive tower-like bastion, some twenty-five feet square, barred approach from the neck and the narrow crest continuing it eastwards. We managed, however, to scramble over its ruined side and then to cross, not without some difficulty, along the top of the decayed wall, about sixty feet long, which connected this outwork with the main defences. We then stood on the line of walls which was meant to defend the rim above mentioned, and first got a sight of the natural terraces with which the hill-top sloped away northward.

Plan of Kizkurghān ruins.

The walls from near the point just described could be traced first running to the north-west for over a hundred feet and then, near a massive corner bastion of which the summit measured about fifteen feet square (seen in Fig. 28), taking a turn to the north. For about a hundred and ninety feet on this alignment following the rocky crest the walls were clearly traceable, whether in their superstructure of sun-dried bricks or in foundations of large rough stones. For about a hundred and forty feet further north remains of walls were visible here and there by the precipitous edge, and where they ceased sheer natural rock walls took their place rendering all fortification unnecessary. Rising still to over twenty feet where in fair preservation, elsewhere decayed almost to their foundation, these walls had once completely protected that portion of the isolated hill-top facing westwards on which alone an attack could be attempted. But even on this side, excepting the narrow neck we had followed, the slopes were far too steep to be climbed by armed men in any numbers. Everywhere else sheer walls of rock descending for hundreds of feet formed unscalable natural defences. From the south-west rim the top of the hill sloped to the north and north-east in a series of terraces which, where they grew broader near the northern end of the line of walls, must have afforded ample space for structures of shelter. But these, having probably been built of rough stones, could be traced only in heaps of rubble in the position which the rapidly executed plan shows. At a point about twenty yards from the northernmost point of the walls the site of a tank, about thirty feet in diameter and closed northward by a thick stone wall, could be clearly made out. A second reservoir was recognizable towards the north rim of the sloping area.

Construction of walls.

The solid construction of the bastioned walls would alone have sufficed to prove a great antiquity for the site. Without this solidity the walls could not have retained a footing on such steep and difficult ground. They showed an average thickness of sixteen feet at the base near the corner bastion, and, apart from large rough slabs used in the foundations, consisted of remarkably regular and closely laid brickwork as seen in the photograph (Fig. 28). The bricks, sun-dried but solid enough, measured on the average fifteen by twelve inches, with a thickness of about five inches. Neither the material, a fine clay plentifully mixed with small pebbles, nor yet adequate water for making them, could have been obtained on the spot, and their transport to this height must have

[6] In the photograph, Fig. 28, taken from the outlying bastion, these brushwood layers are clearly displayed by the curtain wall on the right which has lost its brick facing. But they are present also between the brick courses of the better preserved bastion on the left.

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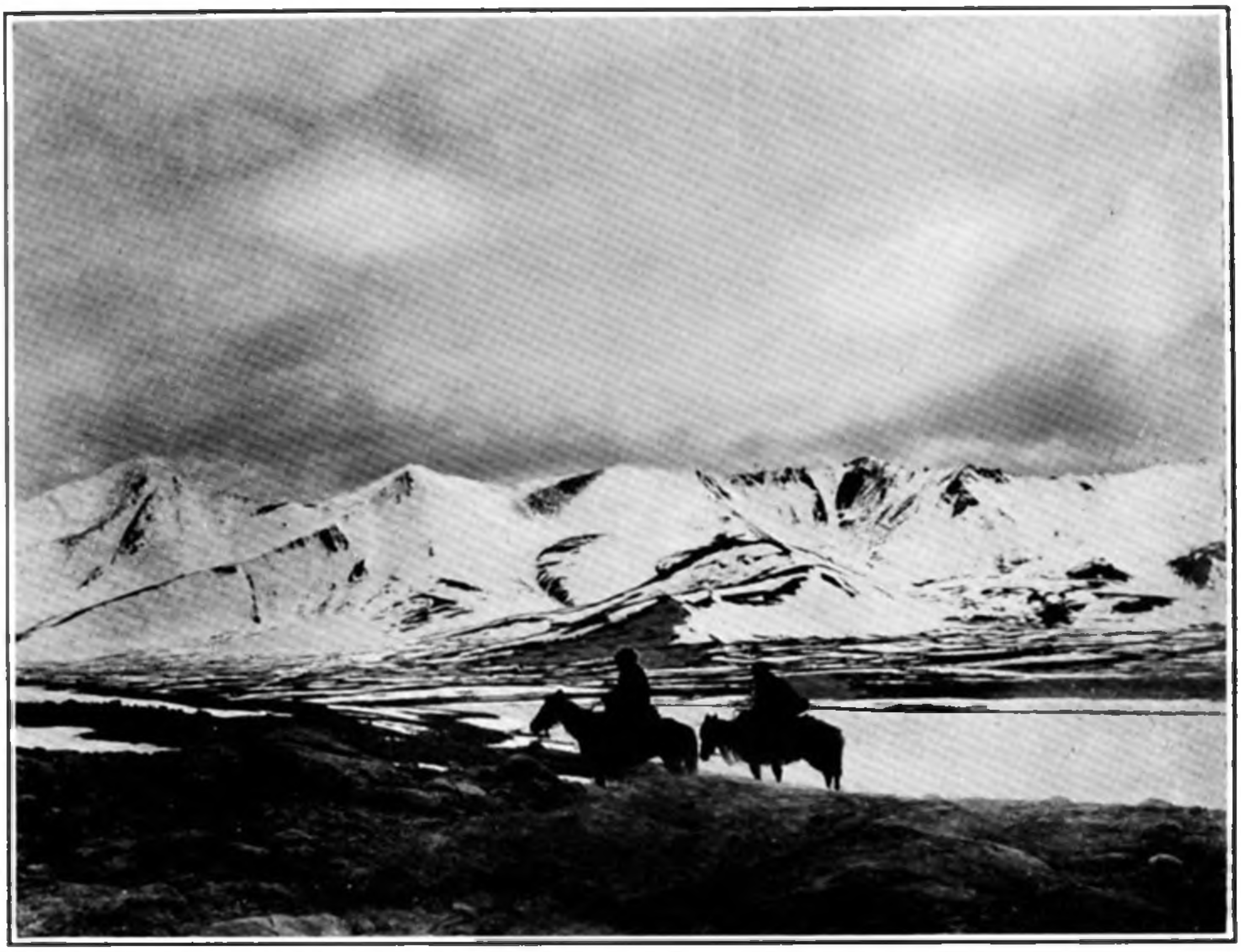
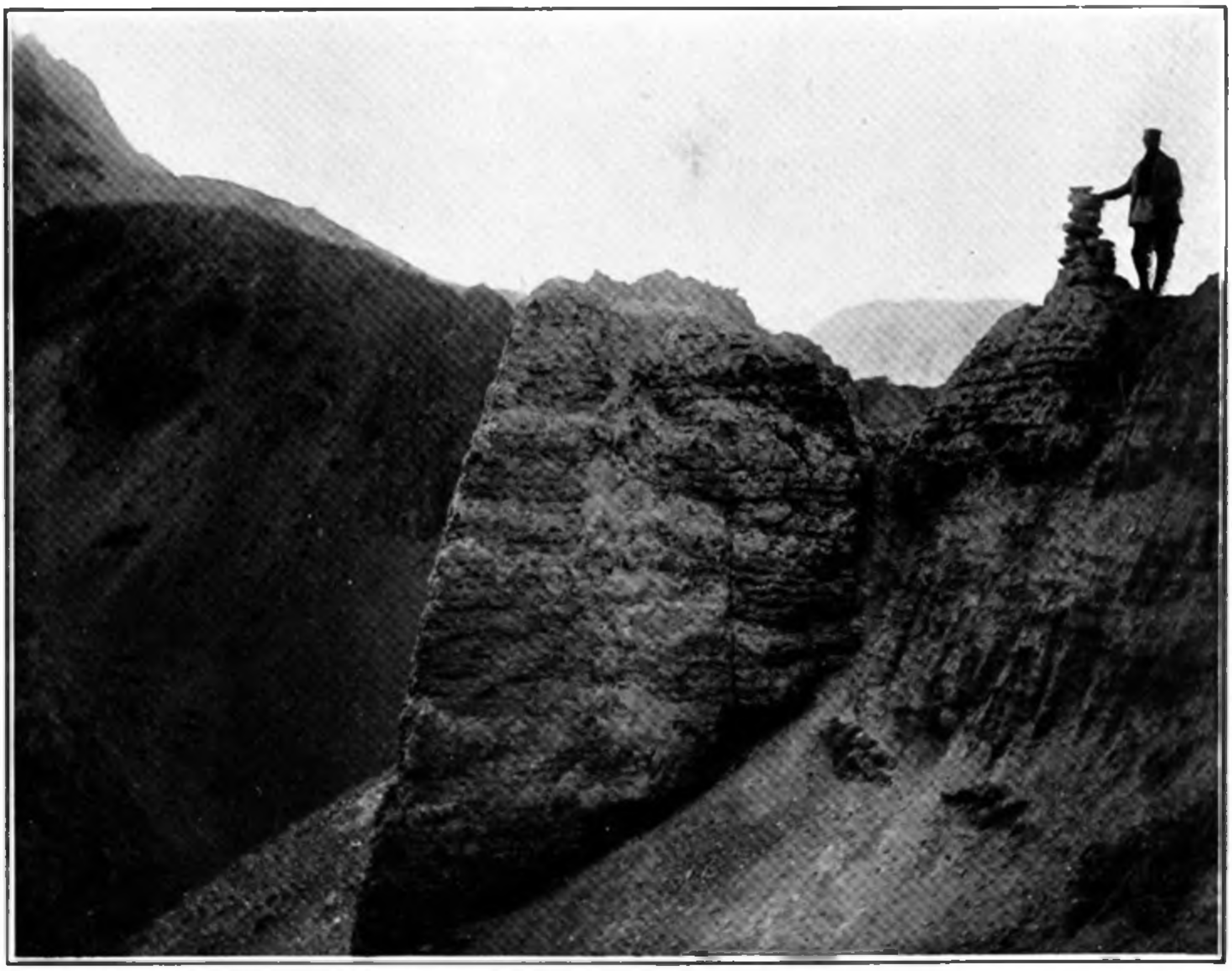
25. VIEW FROM KANSIR FORT ACROSS OXUS VALLEY TOWARDS RANGE ABOVE SARHAD.

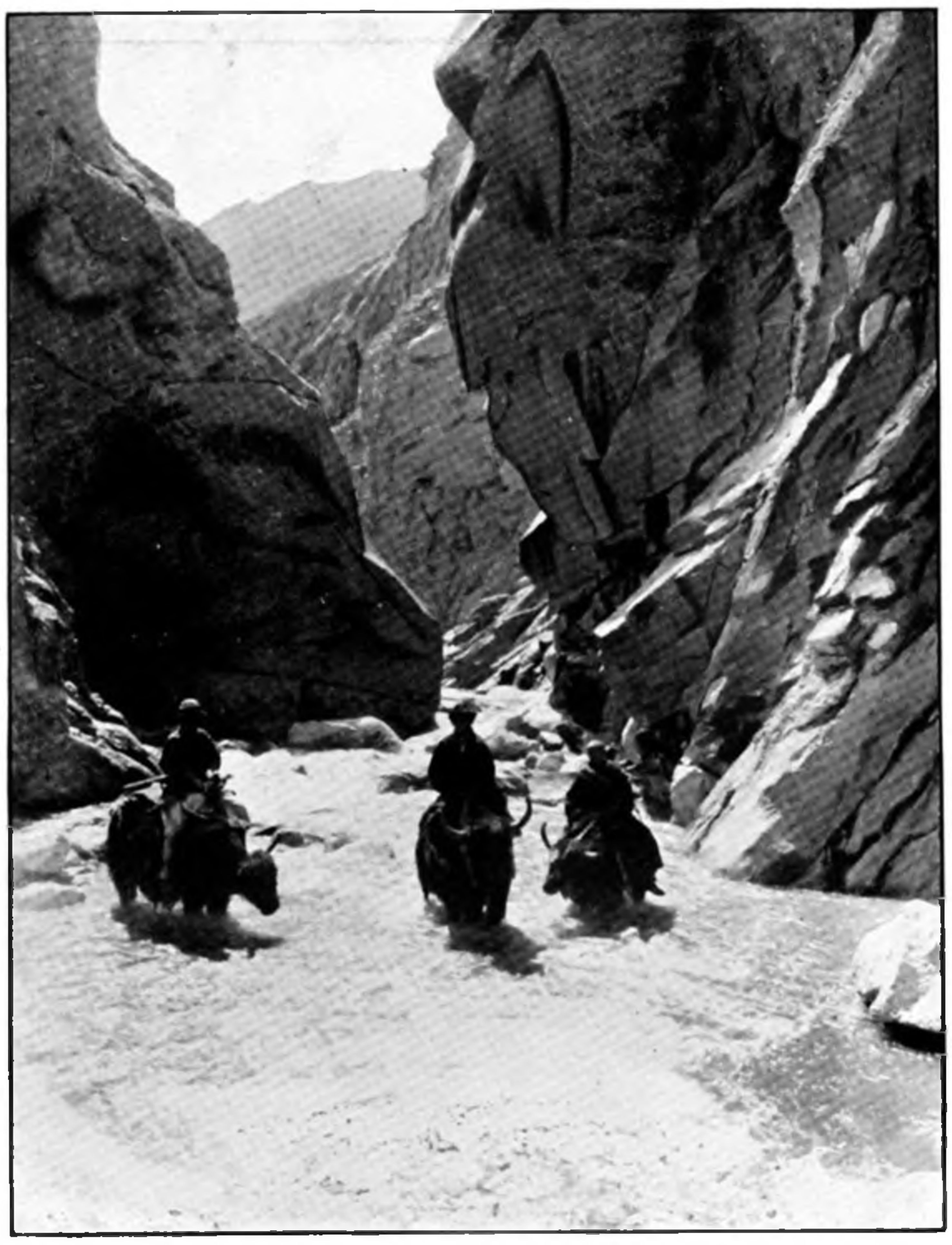
27. SPUR OF KIZ-KURGHĀN, ABOVE TĀGHDUMBĀSH RIVER, SEEN FROM SOUTH.



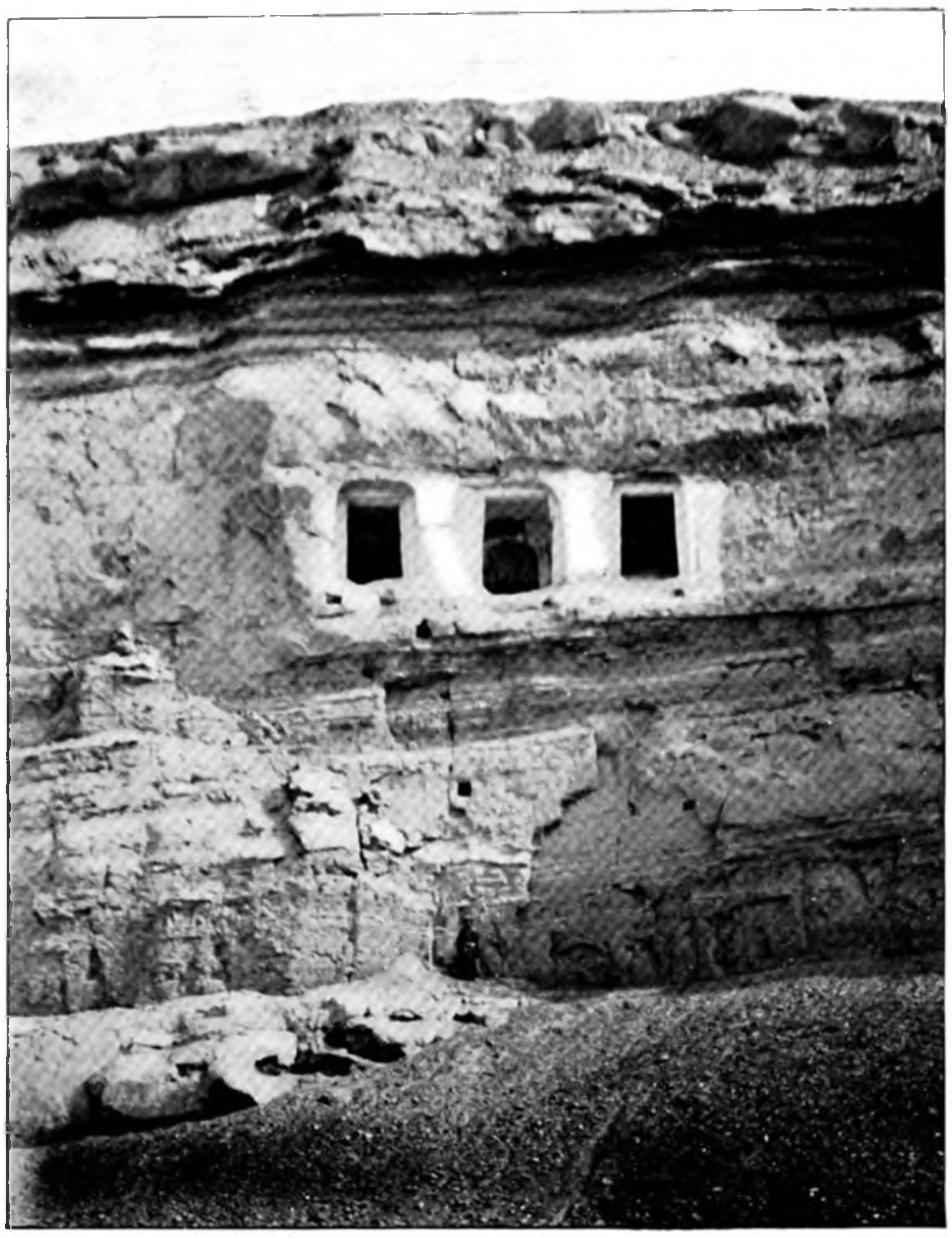
26. VIEW ACROSS CHICHIKLIK MAIDĀN TO SOUTH-WEST.



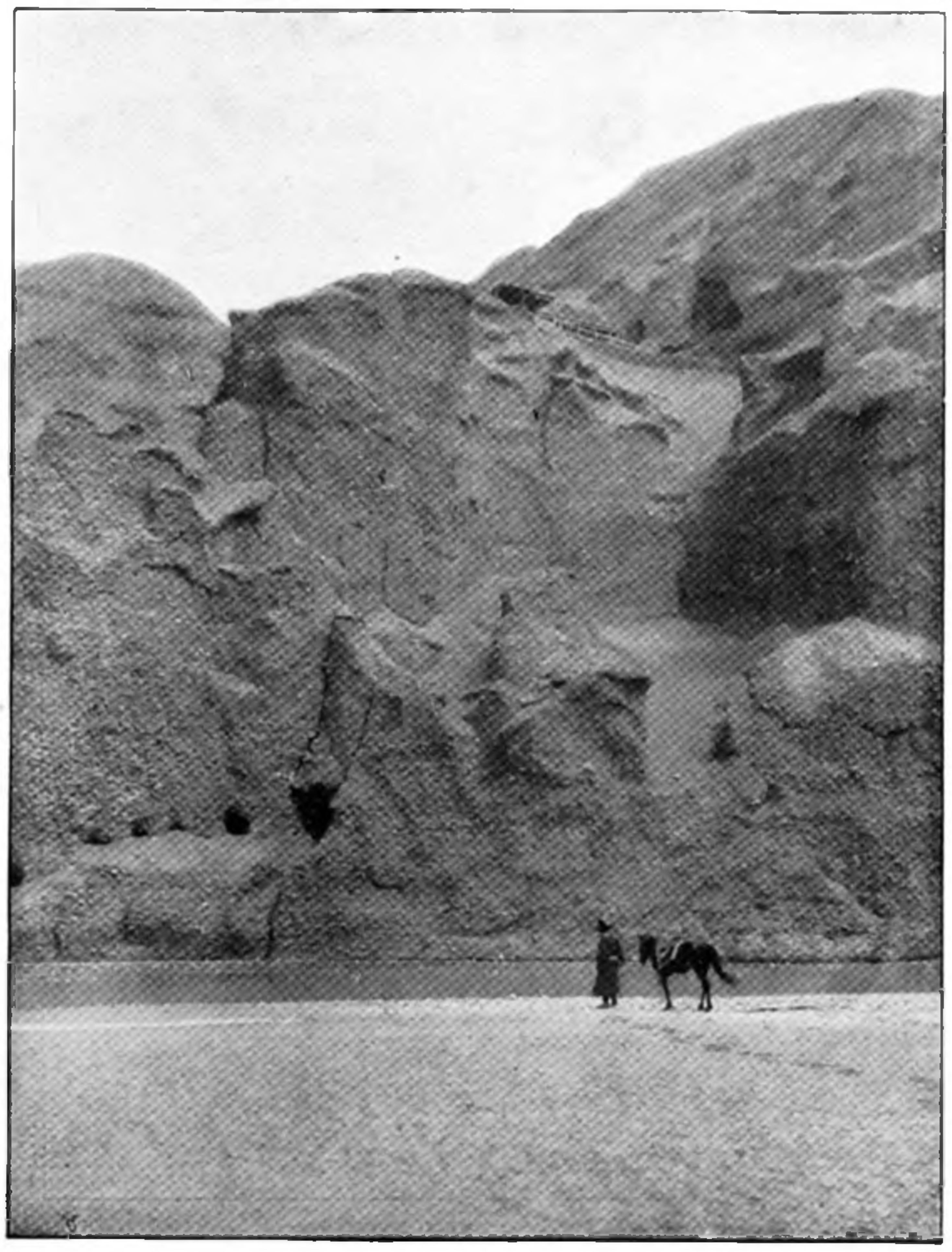
28. RUINED WALL AND BASTION OF KIZ-KURGHĀN, SEEN FROM SOUTH-WEST.



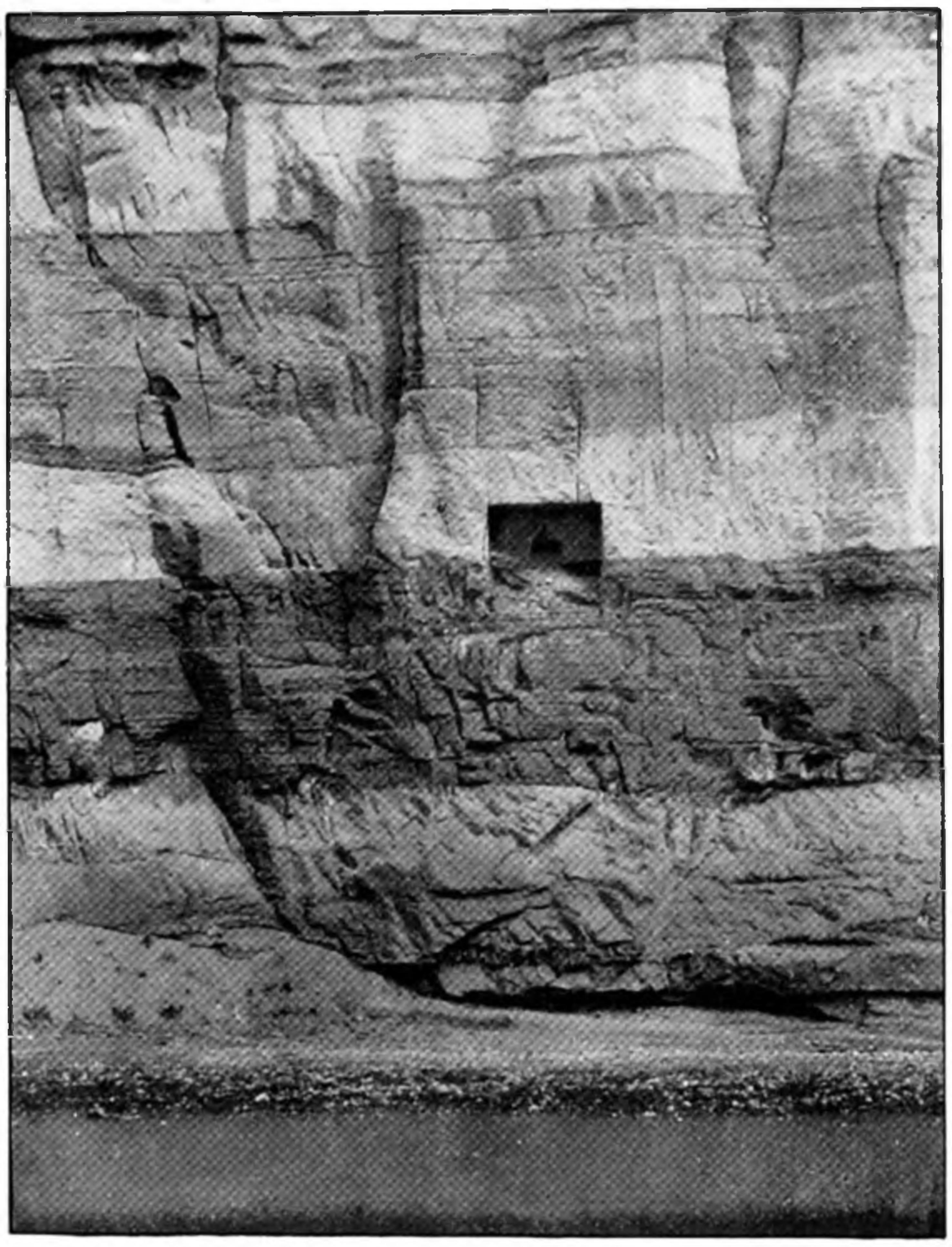
29. IN TANGI-TAR GORGE BELOW TAR-BĀSHI.
Line of holes (i. p. 79) seen on left.



30. ROCK-CUT CELLAS AT ÖCH-MERWĀN.



31. CONGLOMERATE CLIFFS BELOW KOHMĀRĪ MAZĀR.
Natural grottoes (i. p. 95) seen at foot on left.



32. GROTTO CUT ON ROCK FACE ABOVE KARA-KĀSH RIVER, OPPOSITE FAIZĀBĀD.

greatly increased the trouble of construction. Both here and at Kansir the conjecture suggested itself that the insertion of thin layers of twigs and brushwood (here from the juniper growth which is still to be met with in some of the neighbouring side-valleys [7]) was primarily intended as a substitute for an adequate supply of wet plaster to set the bricks; want of water at such an inaccessible height must have rendered this very difficult to prepare. This opinion has been greatly strengthened by the observations subsequently gathered along the ancient Chinese border wall in the desert west and north of Tun-huang, where the difficulties about the carriage of water for building purposes must have been equally great in most places, and where the same expedient was probably first resorted to as a regular constructive feature.

Kiz-kurghān identified with Hsüan-tsang's rock fastness.

But whatever the origin of this method of strengthening the brickwork may be, I felt certain that the old mountain fastness was the same which Hsüan-tsang had seen or heard of. The way in which he records the ancient legend then clinging to it leaves no doubt that it had become ruined long before his own time. The local tradition he had heard ascribed the stronghold to the Han times, the earliest period of Chinese influence in the Tārīm Basin; and it was no small satisfaction to me to see that here, at the very first point where I had touched again his Central Asian route, definite archaeological evidence on the spot confirmed afresh the trustworthiness of the great Chinese traveller. But striking, too, was the evidence afforded by the ruins for the dryness of the climate which prevails in these mountains, and which alone could account for their survival in so exposed a position from so early a date. If Sarīkol had ever in historical times enjoyed much heavier snow and rainfall than it now receives, these ancient walls, perched above precipitous slopes and at an elevation probably close on 13,000 feet above sea level,[8] would have long ago disappeared.

Natural strength of Kiz-kurghān position.

Short as my stay at the site had to be under the conditions described in my personal narrative, it was quite sufficient to convince me of the exceptional natural strength of the position, amounting almost to impregnability in days which knew not gunpowder. Though overlooked by higher spurs both on the north and west, the terraces of the hill-top were quite beyond bowshot. In various ways the position, though much stronger, recalled that of Ādh-i-Samūdh, the old hill stronghold I had examined in 1904 above the Kohāt Valley on the North-west Frontier.[9] The absence of all pottery débris suggested that, just as the latter site, Kiz-kurghān could have served only as a temporary refuge in case of danger, not as a place of permanent occupation. The great natural strength of the position impressed me more than ever when we had safely scrambled down over the slopes of rock and detritus on the south-west and resumed our march to Pisling in the failing light. The narrow track leading by the left bank of the river was completely commanded by the rock walls of Kiz-kurghān. These towered so sheer above it that some contrivance of ropes would have enabled the defenders to gain direct access to the river water, an important consideration of defence. Close investment of the fastness was impossible either from the river or the gloomy winding gorge of the Kiz-kurghān Jilga, which on the north and north-west forms a huge natural fosse with precipitous rock scarps on both sides hundreds of feet high.

March to Tāsh-kurghān.

Proceeding down the gradually widening defile of the Tāghdumbāsh River I passed, some four miles below Kiz-kurghān, old terraced fields with traces of canals from the side-valley of Kara-jilga and reached the Sarīkolī hamlet of Pisling, where present cultivation commences, after another five miles. Thence a long day's march of some forty miles brought me down on May 31 to Tāsh-

[7] When descending by the left river bank to Pisling after my survey of Kiz-kurghān I heard the name *Archalik*, meaning 'place of juniper growth', actually applied to the slopes above the debouchure of the Kara-jilga some five miles below Kiz-kurghān.

[8] The map based on the Pāmīr Boundary Commission's surveys shows the elevation of the Ghujak-bai (Ujadbai) post on the opposite river bank as 11,951 feet.

[9] Cf. Stein, *Archaeol. Survey Report*, N.W.F.P., 1905, pp. 2 sqq.

kurghān, the Sarīkol 'capital' since ancient times. The route along the west side of the wide open valley was new to me and afforded interesting observations, recorded in my personal narrative,[10] as to the extent of arable land here available and its steady resumption now proceeding under the conditions of security and growing population which prevail since incursions from Hunza ceased. Of remains of some modern antiquarian interest I have only to mention the presence of an old fort by the left river bank about one and a half miles below Pisling and a walled enclosure at Ak-tam, some five miles above Tāsh-kurghān.

Remains below Pisling and at Ak-tam.

The fort consists of an enclosure, about fifty-eight feet square inside, with walls built of rough boulders below and sun-dried bricks above. The size of the latter is about one by two feet, with a thickness of six inches. A fosse about thirty-eight feet wide on top and now five feet deep protected the north-west and south-west faces, the others being rendered difficult of access by steep slopes of conglomerate falling off towards the river. Though called 'old' by the Pisling people, the little fort did not look to me of great antiquity, and the absence of layers of brushwood between the courses of bricks confirmed this impression. Nor was it different with the ruins of a walled enclosure, about sixty yards square and built in stamped clay, which I passed, after crossing a dreary waste of sand and gravel, at Ak-tam some five miles above Tāsh-kurghān. Some precarious cultivation resumed here by means of a new canal suggested that the Ak-tam ruin might be that of a Sarai marking the edge of the Tāsh-kurghān oasis as it existed in mediaeval or even more recent times. On the opposite bank of the wide river bed lie the fields of Bāzār-dasht where in 1900 I had heard of scanty remains of houses manifestly occupied in the Muhammadan period. I may here also mention that when passing, some twenty-six miles above Tāsh-kurghān, the fertile meadow land of Ghan on the opposite side of the valley,[11] I was told of the ruins of an ancient fort known as *Taghash* existing on a high ridge rising east of Ghan. A local legend seems to cling to the place, but it was impossible to spare time for a visit.

From Tāsh-kurghān to Kāshgar.

On leaving Tāsh-kurghān on June 3, after a busy halt of two days, I chose for my onward move to Kāshgar the caravan track which crosses the great spurs radiating from the Muztāgh-ata massif to the south and south-east. My choice was due partly to the hope of saving time on this the most direct route—and as my personal narrative shows, I actually succeeded in covering on it the distance of about 180 miles usually reckoned at ten marches, in six days—;[12] but even more it was influenced by the wish to see with my own eyes the route which Hsüan-tsang must have followed when proceeding about A. D. 642 from Chieh-p'an-t'o (or Sarīkol) to Ch'ia-sha (or Kāshgar).[13] The pilgrim begins the account of this journey by remarking on an ancient hospice or *puṇyaśālā* which he reached after journeying from the capital of Chieh-p'an-t'o, i. e. the present Tāsh-kurghān, towards the north-east and marching for two hundred li (or two daily marches) across mountains and along precipices.[14] The position of this religious foundation is described as 'a space comprising some hundred *ch'ing* (thousand Chinese acres), in the midst of the four mountains belonging to the eastern chain of the Ts'ung-ling Mountains'.

Hsüan-tsang's legend

'In this region, both during summer and winter, there fall down piles of snow; the cold winds

[10] Cf. *Desert Cathay*, i. p. 94.

[11] See *Ruins of Khotan*, p. 68.

[12] For a description of this journey see *Desert Cathay*, i. pp. 97 sqq.

[13] Cf. *Ancient Khotan*, i. pp. 42 sqq.

[14] See Julien, *Mémoires*, ii. p. 215; Beal, *Si-yu-ki*, ii. p. 303; Watters, *Yuan Chwang*, ii. p. 286, gives a mere abstract.

The general context of the narrative, especially what it states about the subsequent continuation of the journey from the ancient hospice to *Wu-sha*, by a descent of 800 li from the Ts'ung-ling Mountains eastwards, makes it certain that the initial stages of 200 li are reckoned from the Chieh-p'an-t'o capital. The expression 'from a great rock', used in regard to the starting-point of the journey, refers to the 'rocky ridge' which Hsüan-tsang mentions earlier as the site of the Sarīkol capital; cf. *Ancient Khotan*, i. p. 35; Julien, *Mémoires*, ii. p. 209.

and icy storms rage. The ground, impregnated with salt, produces no crops, there are no trees, and nothing but some wretched herbs. Even at the time of the great heat the wind and snow continue. Scarcely have travellers entered this region when they find themselves surrounded by vapours and clouds. Merchant caravans, in coming and going, suffer severely in these difficult and dangerous spots.' According to an 'old story' which Hsüan-tsang heard related, a great troop of merchants, with thousands of followers and camels, had once perished here by wind and snow. An Arhat of Chieh-p'an-t'o was believed to have subsequently collected all the precious objects left behind by the doomed caravan and to have constructed on the spot a house in which he accumulated ample stores, as well as to have made pious endowments in neighbouring territories for the benefit of travellers.

about hospice in Ts'ung-ling Mts.

Chichiklik plateau.

Taking into account the topographical indications furnished by the pilgrim's own route and the distance and bearing recorded, I had already arrived at the conclusion that the site of the hospice would have to be looked for on the Chichiklik Maidān. This is the plateau-like head of the Shindī Valley which the main route from Sarīkol to Kāshgar crosses at a distance of two marches from Tāsh-kurghān. The Chichiklik Maidān lies between two great mountain spurs radiating southward from the Muztāgh-ata massif, and its position is such that it must be traversed by all travelling in this direction, by whichever of the several passes (Chichiklik, Yam-bulak, or Yangi-Dawān) they may surmount the second or eastern of those spurs. The importance of the Chichiklik Maidān as a natural halting-place and its high elevation seemed to point to it as a suitable place for such a hospice as Hsüan-tsang mentions. But it was only on my actual passage by this route that I was able to verify the conjectured location.

On June 4, the second day of my journey, a difficult ascent through the Shindī gorge brought me to the head of the valley (see Map, No. 3). It was curious to find at that height an almost level plain, about two and a half miles long from north to south and over a mile across, bordered all round by snowy ridges (Fig. 26), and to see with my own eyes how closely its appearance agreed with Hsüan-tsang's description of the site of this ancient hospice. Snowy ridges, rising apparently some 2,000–3,000 feet higher, enclosed it on all sides, except to the north-east where a broad gap marked the scarcely perceptible watershed towards the Tangi-tar Valley. My aneroid indicated for this plain an elevation of about 14,800 feet. Its appearance, as well as the accounts I heard from my experienced caravan-men and Sarīkolī followers, was sufficiently convincing as to the losses which this desolate high plateau, exposed to the winds and snows, claims annually in animals and at times in men, too. Most of it was still under snow. But a low knoll near the centre of the plain was clear, and when, attracted by the sight of a dilapidated Muhammadan tomb or 'Gumbaz', I proceeded to examine the spot, I soon discovered there the foundations of a square enclosure, some thirty-five yards on each side, built of rough but solid stone walls about three feet thick and manifestly of early construction. The correct orientation of the lines of wall would agree well with a pre-Muhammadan origin. At the same time the decayed grave mounds I could trace inside, beside the Gumbaz already referred to, and the information gathered from the Sarīkolīs accompanying me left no doubt about the spot being now held sacred in Muhammadan eyes.

Hsüan-tsang's hospice located on Chichiklik plateau.

The Chichiklik plain, forbidding as it looks, must always, for the topographical reasons already indicated, have formed a regular halting-place, and the central position occupied in it by the ruined structure is exceptionally well adapted for the purposes of a storehouse or hospice such as Hsüan-tsang describes, intended to provide shelter and supplies for travellers from whichever of the several passes they may come. How much time has passed since those walls crumbled away to their foundations can now no longer be determined. But both archaeological and topographical indications seem to justify our recognizing in them the last remains of the ancient structure to which Hsüan-

tsang's record refers. Throughout Chinese Turkestān graveyards are invariably attached to supposed 'Ziārats' of saints. We may therefore safely look upon the graves now found within the enclosure, and the sanctity claimed for the ground, as a distinct trace left behind by the legend which in Hsüan-tsang's days ascribed the foundation of the hospice to the action of a holy man.[15] But there was ocular evidence also of suitability of the spot for a hospice, in the shape of two huts erected under Chinese orders for travellers' shelter some two hundred yards away. Characteristically enough, though dating only since 1903, when Sarīkol was raised to the dignity of a regular civil district, the huts looked already half-ruined.

Goëz' account of Tangi-tar gorge.

In spite of the well-advanced spring and the favourable snow conditions provided by a heavy grey sky, it took us nearly five hours to struggle across the snow-beds of the Chichiklik plain and those of the very gently sloping valley eastwards down to the Kirghiz camp at Tar-bāshi, about 3,000 feet lower. I could well realize the trials presented at other times by that bleak plateau, close on 15,000 feet above the sea, as I recalled the account left by Benedict Goëz, the brave Jesuit lay-brother, who traversed this route in 1603 on his journey from India in search of fabled Cathay. After crossing the Pāmīr he and the large 'Kāfila' of merchants to which he had attached himself for safety had at the hamlets of the 'province of Sarcil', i. e. Sarīkol, 'halted two days to rest the horses. And then in two days more they reached the foot of the mountain called *Ciecialith* (i. e. Chichiklik). It was covered deep with snow, and during the ascent many were frozen to death and our brother barely escaped, for they were altogether six days in the snow here. At last they reached *Tanghetar* (Tangi-tar), a place belonging to the Kingdom of Cascar (Kāshgar). Here Isaac the Armenian fell off the bank of a great river into the water, and lay, as it were, dead for some eight hours till Benedict's exertions at last brought him to. In fifteen days more they reached the town of *Iakonich* (Yaka-arik), and the roads were so bad that six of our brother's horses died of fatigue. After five days more our Benedict going on by himself in advance reached the capital which is called *Hiarchan* (Yārkand), and sent back horses to help on his party with necessaries for his comrades. And so they also arrived not long after safe at the capital, with bag and baggage, in November of the same year 1603.'[16]

Passage of Tangi-tar.

I have quoted the record left of this pious traveller's experiences in full, as it not only serves as a vivid commentary on the dread of the Chichiklik plateau as reflected in Hsüan-tsang's story, but helps also to fix exactly the locality of a curious incident related of his own passage in his biography. From the places mentioned in Goëz' notes it is certain that the route he followed was identical with the present main caravan track which descends from the Chichiklik plateau via Tar-bāshi, and at Chihil-gumbaz, two marches further east, diverges from the route leading to Kāshgar. Tangi-tar, meaning 'the narrow gorge', which Goëz distinctly refers to, is the name borne by the deep-cut and very difficult defile through which the waters of the Tar-bāshi Valley find their way down to their junction at Toile-bulung with the streams coming from the Yam-bulak, Yangi-dawān, and Tor-art Passes (see Map, No. 3). The route enters it about two miles below the Kirghiz grazing-grounds

[15] On this account I felt justified in including a brief notice of this site among the instances of the survival of Buddhist local worship in Central Asia discussed in the article which I contributed to the memorial volume presented to Professor I. Goldziher on his sixtieth birthday (Budapest, 1910) and also published in the *J.R.A.S.*, 1910, p. 839 sqq. I have there called attention to the fact, already established in *Ancient Khotan* as regards the Khotan region, that 'practically all sites that the early Chinese pilgrims describe as sacred to the Buddhist population of their time are still to this day marked by Muhammadan *Ziārats* of note, and that the popular legends attached to the latter often retain clear traces of the earlier Buddhist traditions related by the pilgrims'.

[16] See Sir Henry Yule's translation of Goëz' notes as put together by Ricci, in *Cathay*, ii. p. 562. All the localities mentioned in the extract with the exception of *Yakonich*, had already been correctly identified by Sir H. Yule in 1866, notwithstanding the very scanty information then available about the route from Badakhshān to Yarkand.

of Tar-bāshi, and for over two miles beyond lies in the stream bed itself between high frowning rock walls, which in places overhang (Fig. 29). Owing to the flood from the melting snows, which completely fills the gorge, the route through it becomes quite impracticable during the summer months when the passage from the Chichiklik is diverted to the Yangi-dawān or Yam-bulak Passes. An exceptionally late spring allowed me to pass by the Tangi-tar route on June 5; but even then the deep pools of tossing water and big slippery boulders to be constantly crossed between almost perpendicular cliffs of limestone made the passage very trying and in places dangerous for the baggage.[17]

Hsüan-tsang's adventure in Tangi-tar gorge.

The conditions must have been much the same when Goëz' hard-tried caravan made its way down here in September or October of 1603. I could well understand on the spot the seriousness of the accident which here befell his faithful companion Isaac the Armenian. But there was for me the memory of an adventure far older and of a more famous traveller haunting this forbidding passage. Hsüan-tsang's biography relates how the 'Master of the Law', while journeying from Chieh-p'an-t'o, or Tāsh-kurghān, towards the north-east, on the fifth day 'encountered a troop of robbers.[18] The traders accompanying him were seized with fear and clambered up the sides of the mountains. Several elephants, obstinately pursued, fell into the water and perished. After the robbers had been passed, Hsüan-tsang slowly advanced with the traders, descended the heights to the east and, braving a rigorous cold, continued his journey amidst a thousand dangers. After having thus covered eight hundred li, he passed out of the Ts'ung-ling Mountains and arrived in the kingdom of Wu-sha.' Now the time occupied by the journey from Tāsh-kurghān to the point where the attack was encountered and the general description of the spot clearly point to some defile east of the Chichiklik, and there is certainly none offering the same natural facilities for such an exploit as the Tangi-tar gorge. As a competent observer has noted, 'a few determined men might in places defend it against an army'.[19] The reference to the rigorous cold experienced on the onward journey is also significant. We know that the pilgrim crossed the Pāmīrs during the short summer, and spent fully twenty days in Sarīkol. Hence he probably made his way over the Chichiklik and on towards Wu-sha and Kāshgar in the autumn. At that season none of the streams encountered on the route would be likely to hold sufficient water to prove dangerous to elephants excepting the Tangi-tar stream which, owing to the extremely confined nature of its rock-cut bed, retains deep pools of water even in the winter.

Traces of ancient route in Tangi-tar.

That the Tangi-tar gorge must have always been considered a portion of the route specially exposed to attacks is shown by the ruined watch-tower which rises at the lower end of the gorge where the latter joins the valley coming from the Yam-bulak and Yangi-dawān Passes further north. Its construction was attributed by my local informants to an ancestor of Ibrahīm Bēg, the headman of the Kirghiz grazing in the adjacent valleys. But of greater archaeological interest is the evidence I discovered of the early use of the Tangi-tar route at a very confined point of the gorge, about half a mile from its upper end (Fig. 29). There the rock walls on either side show a line of seven well-cut holes, about six inches deep and eight inches across, either square or circular, which were undoubtedly meant for the insertion of beams. A bridge or platform laid over these must have saved travellers and their animals the crossing of slippery and half-submerged boulders at a particularly awkward place. The work in these holes, chiselled out with much care and neatness, was, apparently, ancient.

[17] See *Desert Cathay*, i. pp. 99 sq.; for a description of the route cf. also *Yarkand Mission Report*, p. 267.

[18] See Julien, *Vie*, p. 274 sq.; Beal, *Life*, p. 200. The former translation has *north-west*, a manifest error, as shown by *Mémoires*, ii. p. 214.

[19] See Captain (now Colonel) H. Trotter's description of the defile, *Yarkand Mission Report*, p. 267.

Hsüan-tsang's territory of Wu-sha.

In *Ancient Khotan* I have already fully explained the reasons which convince me that Hsüan-tsang's territory of Wu-sha, then subject to Sarīkol, comprised both Yārkand and Yangi-Hisār, and that the route followed by the pilgrim after his passage of the Chichiklik plateau took him first to Yangi-Hisār and thence on to Chia-sha or Kāshgar.[20] On the rapid marches which carried me by June 8 to Kāshgar, by way of Ighiz-yār and Yangi-Hisār, and which will be found described in Chapter IX of my personal narrative, I may thus assume that throughout I followed my 'Chinese patron-saint's' track, even though this offered no scope for fresh antiquarian observations.

Section IV.—ABOUT KĀSHGAR AND YĀRKAND

Arrival at Kāshgar.

My arrival at Kāshgar meant a return to ground familiar already from prolonged visits in 1900–1. There my old friend Mr. (now Sir) George Macartney, K.C.I.E., then the political representative of the Indian Government and now His Majesty's Consul-General for Chinese Turkestān, offered me the kindest welcome. But neither this nor the need of some physical rest after six weeks of constant and arduous travel would have been a sufficient inducement for a fortnight's stay had not a host of practical tasks, connected with the organization of my caravan, the purchase of transport animals, etc., as described in Chapter X of my personal narrative, kept me hard at work all that time. Sir G. Macartney's kind offices, supported by his great personal influence and to some extent also by a recollection of my previous archaeological labours about Khotan, were a great help in securing the goodwill of the provincial Chinese government for my fresh explorations.

Chiang Szŭ-yeh, Chinese *literatus*.

But it was a service of quite as great importance, and one for which I shall always remain truly grateful, when he recommended to me a qualified Chinese secretary in the person of Mr. Yin Ma Chiang or Chiang Szŭ-yeh, to give him his familiar title. For the tasks before me the help of a Chinese *literatus* had appeared from the first indispensable. Having had always to carry on my scholarly labours amidst struggles for leisure, I have never had a chance of extending my philological equipment by a serious study of Chinese, much though I feel its need. A kindly Fate gave me in Chiang Szŭ-yeh not merely an excellent teacher and secretary but a devoted helpmate ever ready to face hardships for the sake of my scientific interests. Full of the true historical sense innate in every educated Chinese he took to archaeological work with keen zest and intuitive aptitude, and whether the remains to be explored were Chinese or foreign in origin, he watched and recorded everything with the same unfailing care and thoroughness. Apart from the great personal benefits which I derived throughout my explorations from the companionship of this learned Chinese comrade, and to which my personal narrative bears ample testimony, research owes Chiang Szŭ-yeh direct debts for valuable scholarly labour in connexion with numerous tasks I shall have occasion to mention hereafter.

In Chapter III of my *Ancient Khotan* I have already given a detailed review of the data which the accessible Chinese records furnish for the history of Kāshgar territory during the pre-Muhammadan period.[1] The additional information which has since become available, mainly through M. Chavannes' labours and in particular by his translation of the account of the 'Western Regions' in the Annals of the Later Han dynasty,[2] is useful in regard to some details, but its scope is not sufficiently wide to justify fresh treatment of the subject by a non-Sinologist student.

[20] Cf. *Ancient Khotan*, i. p. 31. The remark there made in note [20] as to the time of the subsequent journey over the Chichiklik requires modification, in view of local observations not previously available and now duly considered in my present explanations.

[1] See *Ancient Khotan*, i. pp. 52–72.

[2] Cf. Chavannes, *Pays d'Occident*, pp. 58–61, where historical notices of the years A.D. 73–170 concerning Kāshgar are collected (*T'oung-pao*, 1907, pp. 204 sqq.); *Trois généraux*, pp. 14 sqq., 18 sqq., 22, 26, 48 (*T'oung-pao*, 1906, pp. 222 sqq., 226 sqq., 230, 234, 252); *Notes addit.*, pp. 19, 25, 48, 85.

Ruins of 'Öch-merwān'.

Similarly I had fully discussed, in Chapter IV of my *Ancient Khotan*, whatever ancient remains had come to my knowledge at Kāshgar and in its vicinity.[3] But by a curious chance a ruined site not far beyond the northern edge of the oasis had then completely escaped me. Probably just because they were familiar to most Europeans stationed at Kāshgar, the ruins of *Öch-merwān*, 'the three windows', had never been mentioned to me. I was now anxious to pay them a visit even though I had reason to assume that they had been included in the late Consul-General Petrovsky's paper on the antiquities of Kāshgar,[4] and though I knew that they had been surveyed also by such competent archaeologists as Professors A. Grünwedel and Von Lecoq during the prolonged stay which the Royal Prussian Archaeological Expedition had made at Kāshgar about six months before my own arrival. In view of these earlier surveys I did not feel justified in devoting more than a single day's rapid visit to the ruins and must here, too, content myself with a mere sketch of their essential features.

Proceeding on June 21 north of the 'old town' of Kāshgar by the great route which leads towards the Ārtush Valley and the passes across the T'ien-shan, I found the ruins about two miles beyond the northern edge of the main Kāshgar oasis. They rise on the barren gravel-strewn 'Dasht' known as Chamalik Sai where this skirts the right bank of the wide bed of the Ārtush River (see Map No. 2). As the most conspicuous remain of the site there rises a much-decayed Stūpa (Fig. 33), about a mile to the west of the nearest fields of the small village of Titürghe. To the north-west of the Stūpa and along the steep bank of the river bed there stretches a low gravel ridge with remains of ancient fortifications both on its narrow top and at its southern foot. The whole is known as *Khākānning-shahri*, 'the town of the Great Khān', while the ruined Stūpa is given the familiar designation of 'Tim'. The Stūpa, at the extreme east of the area, rises, as the photograph shows, on a loess mound about ten feet high which, unless it is artificial, must owe its existence to wind erosion having lowered the adjacent open ground. The much-scoured appearance of the barren foot-hills beyond the broad and almost dry river bed (cf. Fig. 34), and of those lining the Chamalik Sai from the south, bore ample evidence to the great erosive force which the desert winds must exert here even so close to the cultivated area.

Stūpa ruin of *Khākānning-shahri*.

The Stūpa, still rising to a height of about thirty-two feet, was solidly built of sun-dried bricks set in thick layers of plaster, but has suffered so badly from cuttings and other wilful damage that the original facing could be traced only of the circular drum and of the commencement of the dome above it. Of the base all that could be made out with any certainty was that it had a square shape and measured about thirty-two feet on each side in the lowest course. The different stories of the base could no longer be distinguished, and this, with the broken state of the drum and dome, renders it impossible to compare the proportions with those of the Maurī-tim Stūpa I had surveyed six years earlier to the north-east of Kāshgar.[5] But it is noteworthy that the small shaft through the centre of the dome and drum observed in the latter ruin existed here, too, with a dimension of about three and a half feet square; a cutting effected from the east side of the dome had laid it bare to the eye. Another common feature was presented by the horizontal rows of sticks or closely laid branches which were found projecting near the foot and top of the drum and, no doubt, once served to support cornices or other decoration in stucco. The bricks measured on the average fifteen by twelve inches with a thickness of four inches, and the layers of mud plaster between their successive courses showed a thickness of one and a half to two inches.

Ruined fort of *Khākānning-shahri*.

This relic of Buddhist worship sufficed to determine that the ruined walls enclosing two small forts a short distance to the north-west (seen in the background of the photograph in Fig. 33) were

[3] Cf. *Ancient Khotan*, i. pp. 73–86.

[4] Cf. for this account, which I regret not to have been able to consult myself, *ibid.*, p. 81, note 5.

[5] See *Ancient Khotan*, i. pp. 81 sq.; ii. Pl. XXII.

also of pre-Muhammadan date. The crumbling walls, from three to five feet in thickness, are built of sun-dried bricks of practically the same size as those of the Stūpa. To my regret the accidental loss of the plane-table sketch I had made renders it impossible to indicate here the exact size and shape of the two fortified areas. But the photograph in Fig. 34 of the one occupying the north-west end of the ridge and situated at a distance of about 168 yards from the other, will help to give an idea of their appearance and state of preservation. This detached fort is confined to the top of the narrow ridge of clay and gravel which rises to about forty feet above the 'Dasht' level, and proved nowhere more than eighty feet in width. The best-preserved portion of the enclosing wall to the south-east (seen on the extreme right in Fig. 34) stands to a height of some twenty feet and still shows a row of loopholes. The position was rendered particularly strong by the ridge falling away here to the river bed in very precipitous cliffs, about 120 feet high.

The other fortification, nearer to the Stūpa, showed an outer enclosure on level ground southward, with two massively built towers, about eighteen feet square, on its east face. The interior was covered with coarse pottery débris, marking prolonged occupation. A very curious feature was a line of double walls, running from a point near the south-east corner of the enclosure in the direction of the ruined Stūpa for a distance of about fifty-six yards. The walls, separated by a distance of ten and a half feet from each other, showed inferior construction and a line of holes at a height of about six feet above the ground. Were they meant for loopholes—or intended to hold wooden pegs for fastening large clay images, if this strange passage had served as a kind of Vihāra approach?[6] Neither here nor within the main enclosures did I see débris or structural remains inviting excavation. Nor was there much hope of relics of interest, such as written records, surviving to any extent on ground bare of the protecting cover of drift-sand, and in most parts exposed on its slopes to the full effects of such downpours as this north-western rim of the great basin from time to time knows.

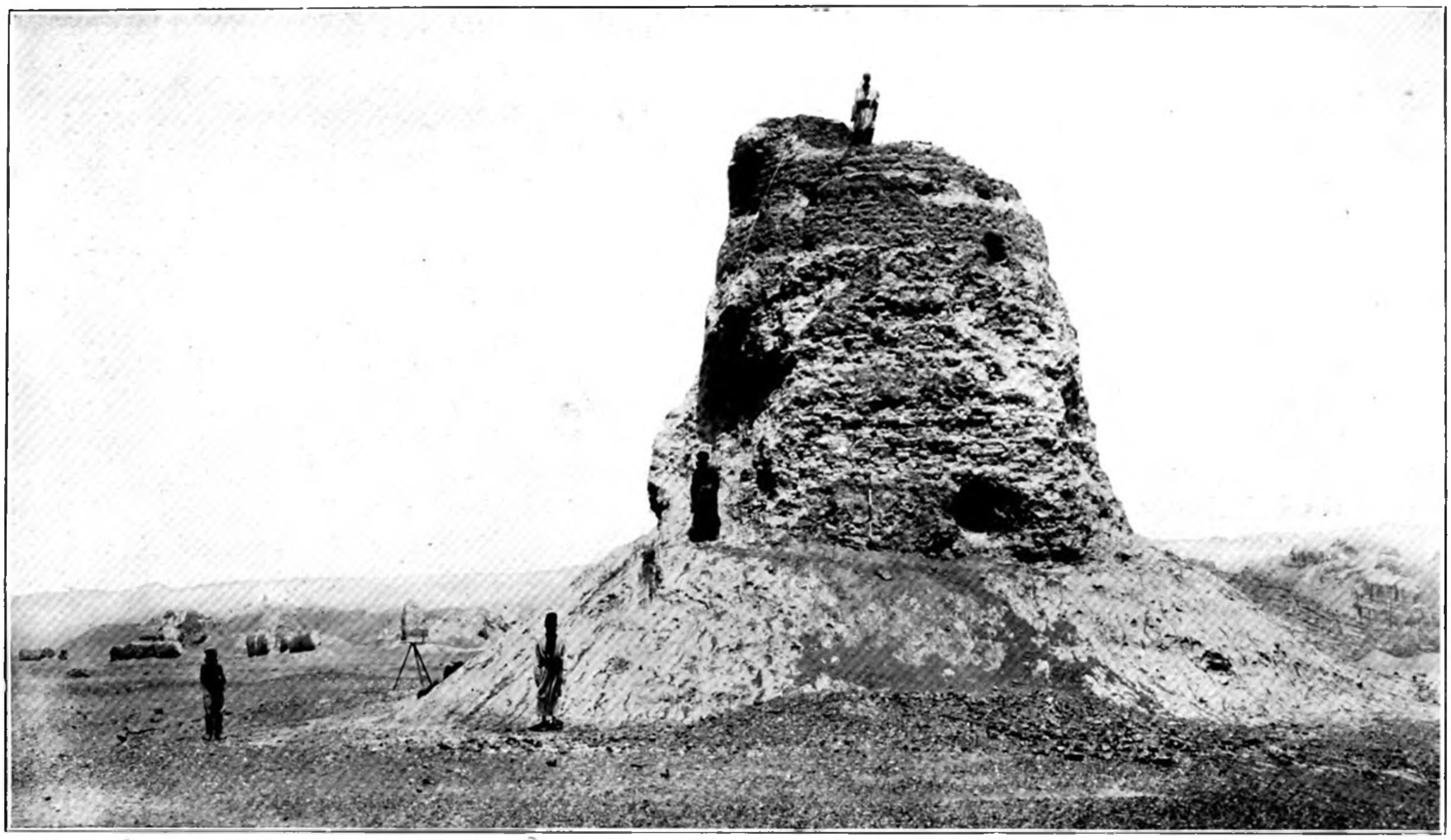
Rock-carved cellas of *Öch-merwān.*

About one mile beyond Khākānning-shahri north-westwards the road to Ārtush passes, on its left, below a long sandstone terrace rising with an almost vertical rock face above the flat riverine 'Dasht'. There, carved into the rock at a height of about fifty feet above the top of the detritus slope which has accumulated at the foot of the terrace, and about as much below the overhanging brink of the latter, gaped the three niches which have given to the locality its name *Öch-merwān*, 'the three windows' (Fig. 30). The doorways, carefully carved from the rock within shallow recesses, showed slightly slanting jambs, and seemed to measure about eight feet in height and about six across, with a similar distance left between them. At the back of the shallow central niche I could easily make out the painted head of a Buddha, with hair-knob and halo, black on white, which Sir G. Macartney appears to have been the first to notice; it is recognizable also in the photograph. The two side niches seemed much deeper, and suggested a connecting passage behind, which would permit the orthodox circumambulation or 'Pradakṣiṇā' of the sacred image in the small central niche, after a plan which I found subsequently illustrated by numerous cave-shrines near Tun-huang and Kuchā. Square holes cut into the rock at irregular intervals below the niches had once served to carry the scaffolding needed for access to this little cave temple. To clamber up to it with the help of a rope let down from above proved impossible, and there was no time to improvise a rope-ladder such as, I understood, had been used by the Cossacks who first visited the caves. Since they had been examined also by members of the Prussian archaeological mission, I could rest content with what my glasses showed me.

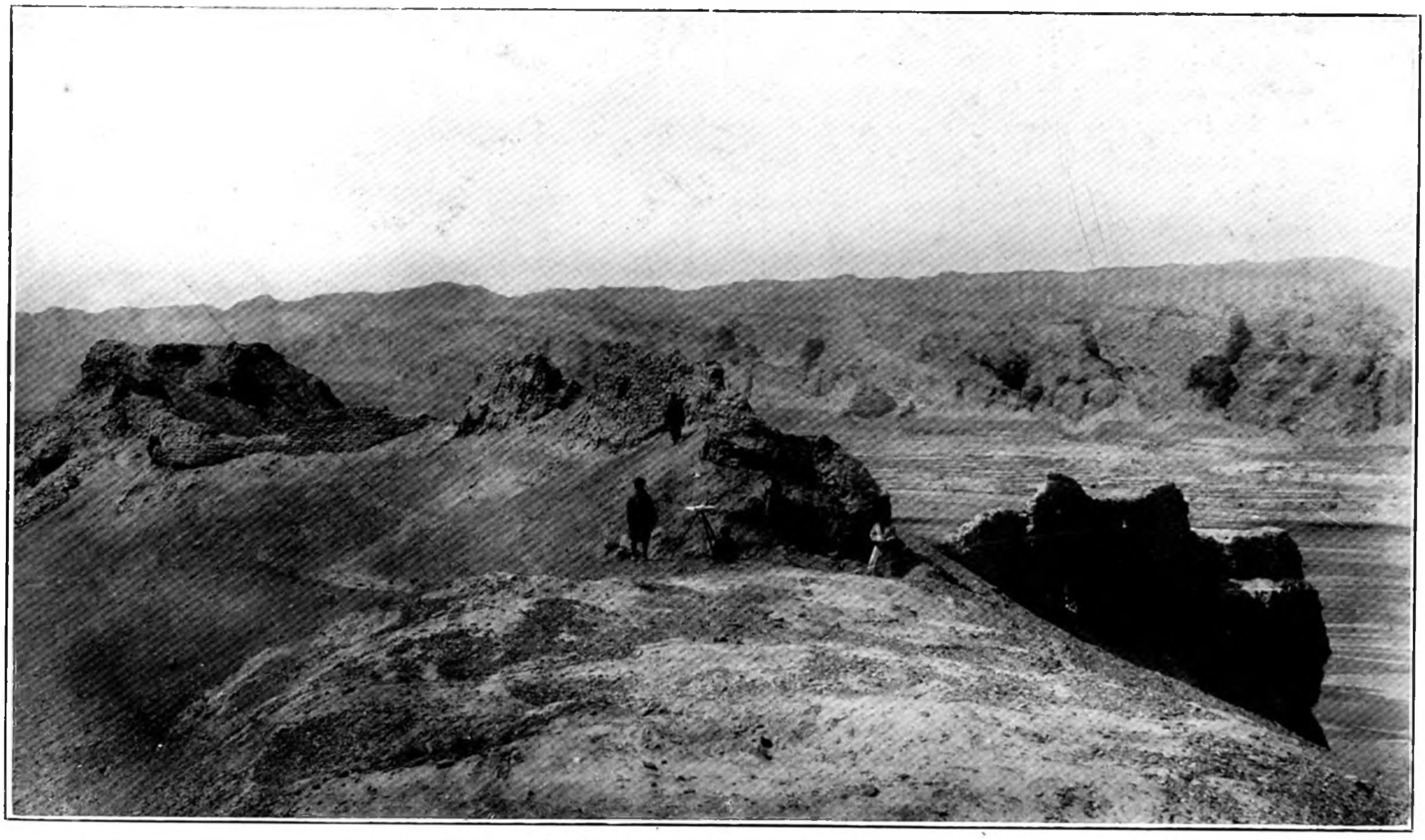
Early history of Yārkand.

The journey which brought me in five days (June 23–7) from Kāshgar to Yārkand, lay by the

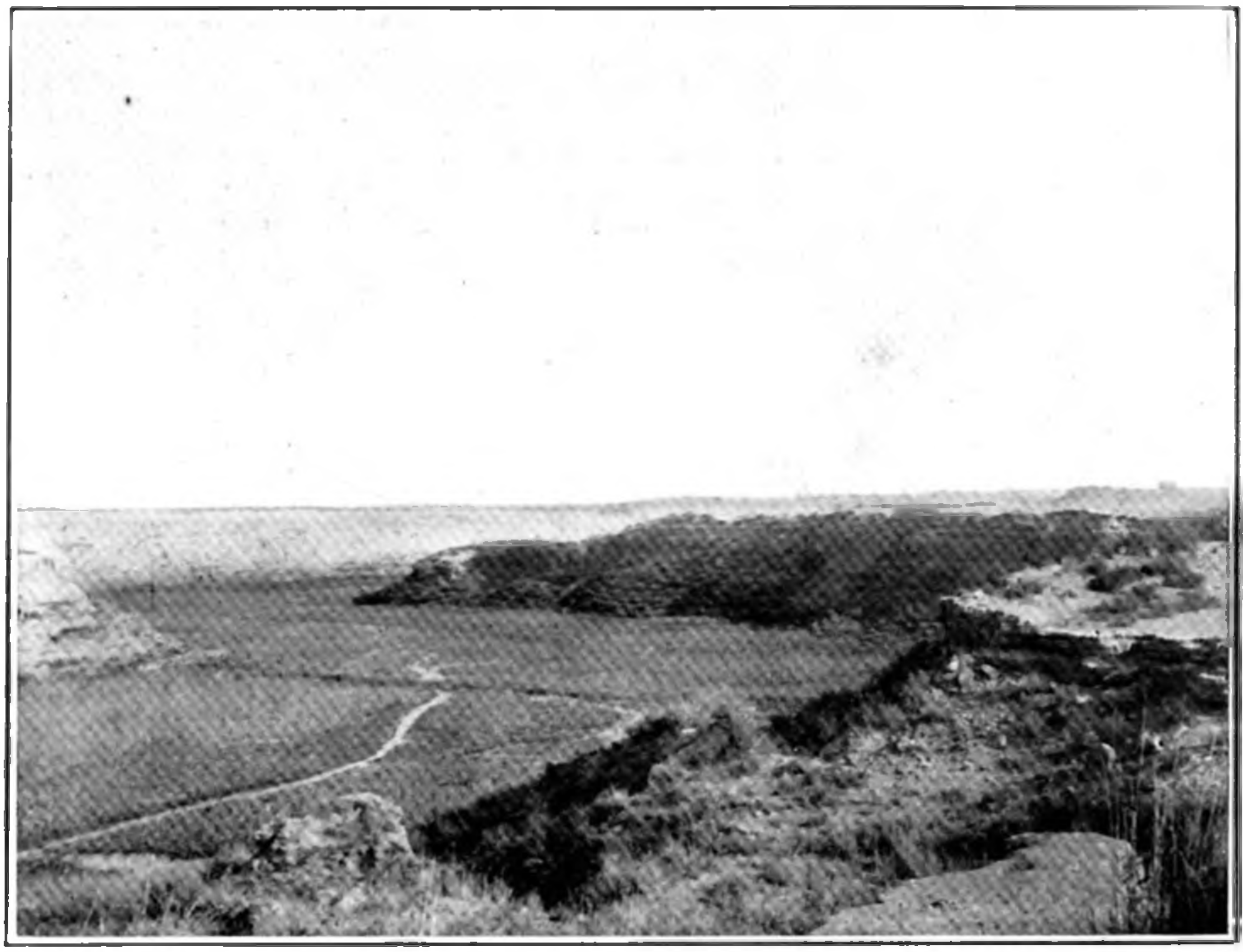
[6] Cf. *Ancient Khotan*, i. p. 487, for the traces left by such wooden fastenings in the walls of the Rawak Vihāra.



33. RUINED STŪPA AT SITE OF KHĀKĀNNING-SHAHRI, NORTH OF KASHGAR.

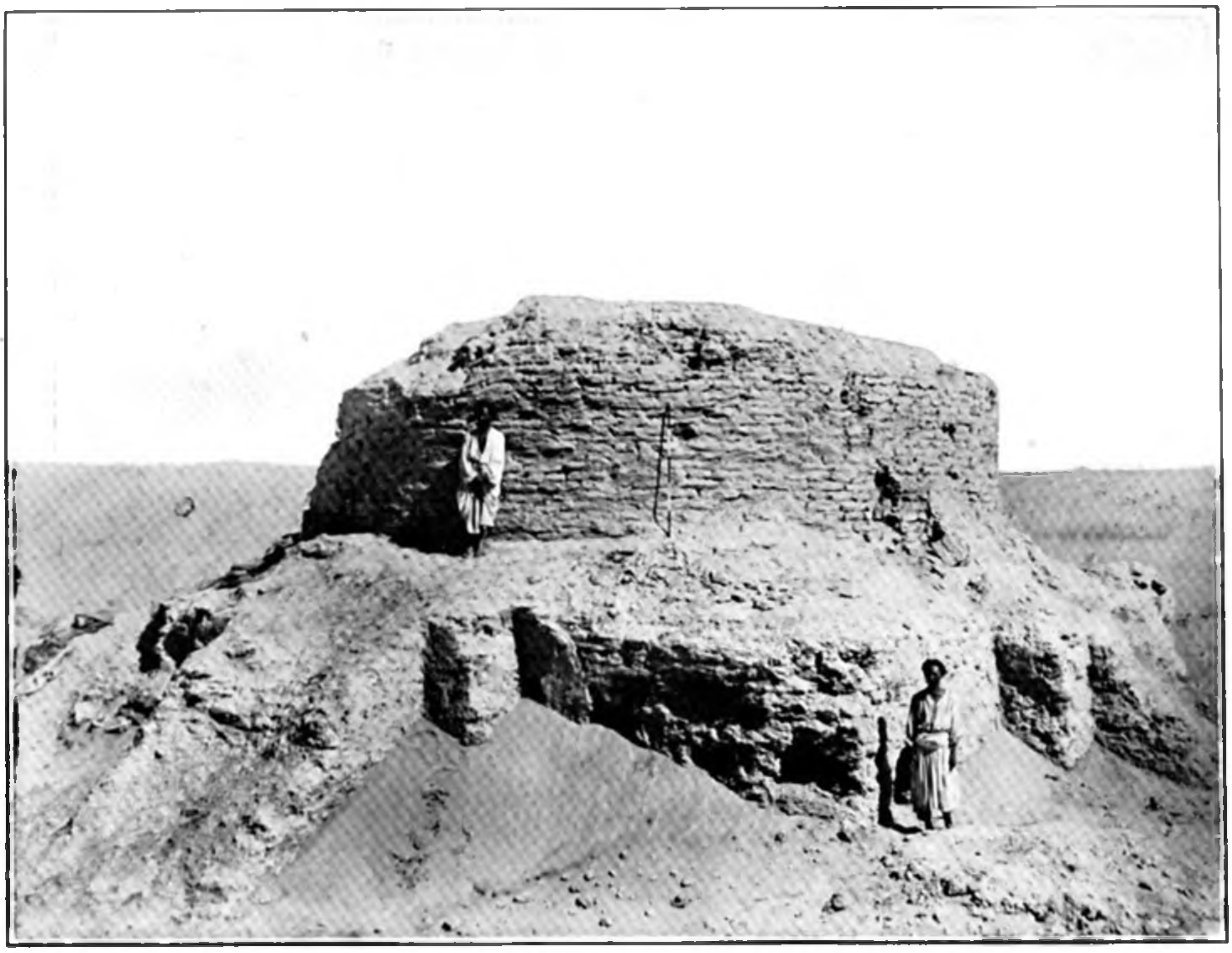


34. RUINS OF ANCIENT FORT, KHĀKĀNNING-SHAHRI, ABOVE RIGHT BANK OF ĀRTUSH RIVER.

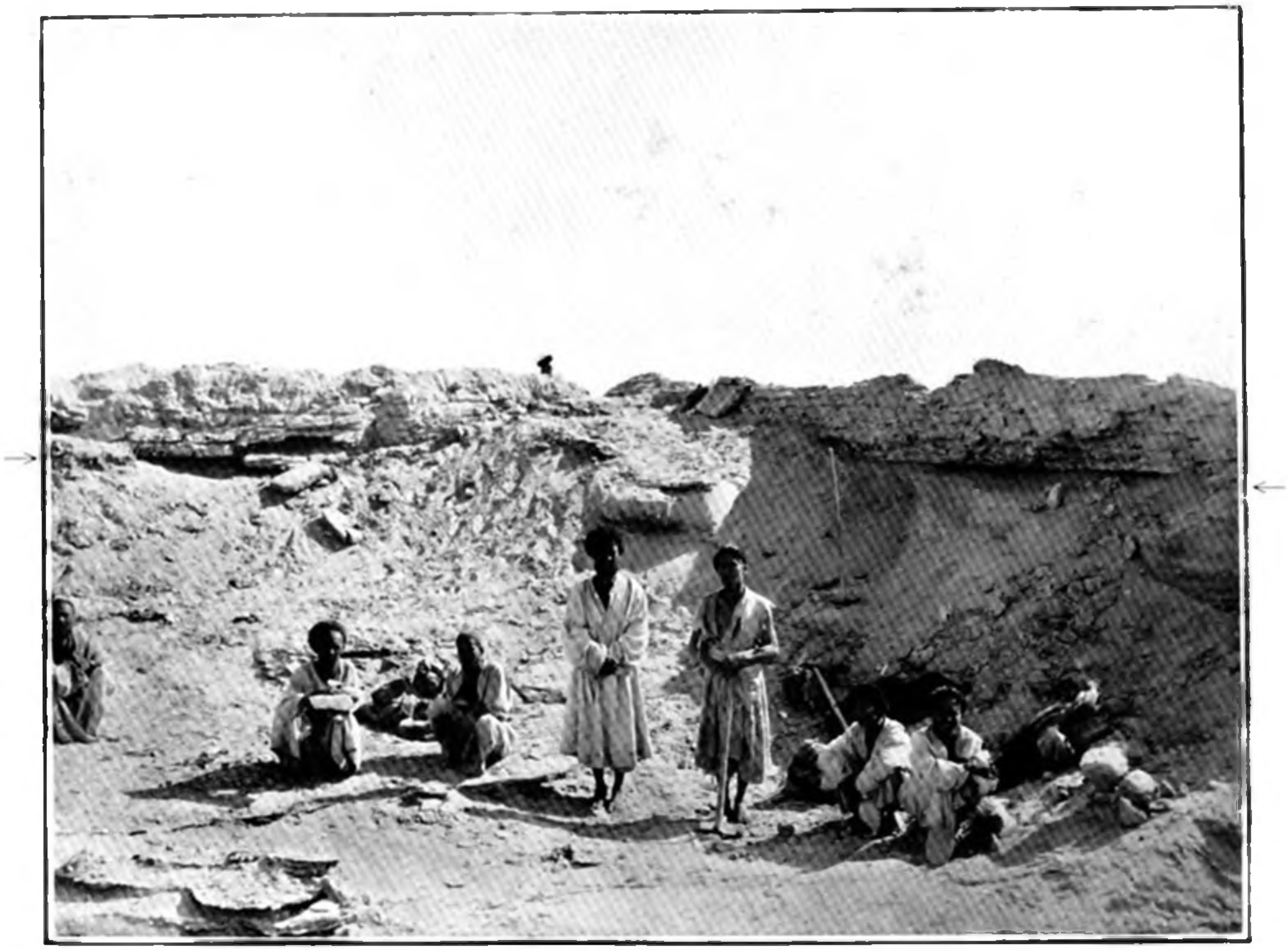


35. RAVINE OF DOMOKO-YĀR, SEEN FROM EASTERN END OF DAM.
(See i. p. 203.)

37. REMAINS OF RUINED MOUND, NAGHĀRA-KHĀNA, NEAR YŌTKAN, SEEN FROM SOUTH.



36. RUINED STŪPA OF RAWAK, SEEN FROM DUNE ABOVE SOUTH-WEST WALL OF QUADRANGLE.



38 WIND-ERODED REMAINS OF RUINED TEMPLE AT KĪNE-TOKMAK.
Arrows mark lowest masonry course of south-east and south-west walls of cella.

main road I had followed in 1900-1, and offered no scope for antiquarian observations. Nor should I have anything to add to the account I have given in *Ancient Khotan* of the historical past of Yārkand and its great oasis,[7] had not M. Chavannes' translation of the chapter of the Later Han Annals dealing with the Western Regions and of another chapter containing the biographies of three Chinese generals famous for their Central Asian exploits, rendered accessible a great deal of fresh information on the political condition of this ancient territory of *So-ch'ê* during the first century of our era. Referring to M. Chavannes' original publications for all details, I shall content myself here with supplementing my former account by a summary of the essential facts.

So-ch'ê in Later Han Annals.

In striking contrast to the T'ang period when Yārkand manifestly was not a place of importance, receiving definite mention neither in the Annals nor in Hsüan-tsang's account, the records of the Later Han dynasty show it clearly as a powerful state, for a time exercising predominance over the whole Tārīm Basin and even beyond it. So-ch'ê 莎車, of the identity of which with the present Yārkand there can be no doubt,[8] under its king Yen was stronger than the rest of the territories of the 'Western Regions', and refused to submit to the Hsiung-nu or Huns when these profited by the troubles under the usurping emperor Wang Mang (A.D. 9-23) to assert their power in this region.[9] K'ang, the successor of Yen, also remained loyal to the distant Imperial power and received in A.D. 29 nominal command over the 'fifty-five kingdoms' then counted in the 'Western Countries'. In A.D. 38 all the kingdoms east of the Ts'ung-ling are described as subject to Hsien, king of So-ch'ê, who from A.D. 33 to 61 figures as the strongest ruler in those regions.[10] In A.D. 41 the Imperial Court, whose authority in the Tārīm Basin still remained more or less nominal, was induced for a time even to grant him the title of 'Protector-General'. Subsequently Hsien threw off this allegiance, attacked the territories of Khotan, Shan-shan (or Lop-nōr), and Kuchā and forced them to accept his own nominees as rulers or else to seek protection from the Hsiung-nu in the north.[11] Even in Ta-yüan, or Farghāna, he asserted his authority. Finally, Khotan in A.D. 60 successfully rose against Hsien. After several vain attempts at reconquest he was himself besieged in his own capital So-ch'ê and succumbed in the following year to Kuang-tê, king of Khotan.[12]

So-ch'ê subject to Huns.

Subsequently the Hsiung-nu or Huns appear to have asserted their power at So-ch'ê for a time and even to have reduced Khotan to a tributary state.[13] But by that time Chinese power had begun to reassert itself in the Tārīm Basin under the great general Pan Ch'ao. After securing Khotan and Kāshgar for the Imperial cause about A.D. 74 he extended his influence over other territories.[14] In spite of several revolts and set-backs his policy 'of using the barbarians to attack the barbarians' enabled this able leader and statesman gradually to consolidate Chinese authority among the contending states.[15] At last, in A.D. 88, he succeeded in subjecting So-ch'ê in spite of the aid brought by the then powerful state of Kuchā.[16] Three years later Kuchā itself, which appears to have relied first upon the Huns and subsequently upon an invasion attempted by the Yüeh-chih, or Indo-Scythians, from the Oxus, was obliged to make its submission with other territories along the northern rim of the Tārīm Basin. In A.D. 94 the

[7] Cf. *Ancient Khotan*, i. pp. 87 sq.

[8] This identity is fully recognized also by the present Chinese administration which gives to the Yārkand district the designation of *So-ch'ê*.

[9] See Chavannes, *Pays d'Occident*, p. 50 (*T'oung-pao*, 1907, p. 196).

[10] See *ibid.*, p. 51 (*T'oung-pao*, 1907, p. 197).

[11] Cf. *ibid.*, pp. 52 sqq. (*T'oung-pao*, 1907, p. 199).

[12] See *ibid.*, pp. 56 sqq. (*T'oung-pao*, 1907, p. 203).

[13] *Ibid.*, p. 58 (*T'oung-pao*, 1907, p. 204); Chavannes, *Trois généraux*, p. 13 (*T'oung-pao*, 1906, p. 218).

[14] See Chavannes, *Trois généraux*, pp. 13 sqq. (*T'oung-pao*, 1906, pp. 218 sqq.).

[15] See *ibid.*, p. 18 (*T'oung-pao*, 1906, p. 222).

[16] Cf. *ibid.*, pp. 23 sqq. (*T'oung-pao*, 1906, pp. 231 sqq.). A previous attempt on So-ch'ê, in A.D. 84, appears to have failed.

reconquest of the latter was completed by the subjection of Yen-ch'i, or Kara-shahr, in the north-east.[17]

Coin find at Yārkand.

During my four days' stay at Yarkand I was as unsuccessful as on my previous visits in obtaining information as to any old sites. The position of 'the old city' of Yārkand, from which Abā Bakr the tyrant, was, according to Mīrzā Ḥaidar's testimony, believed to have excavated great riches,[18] still remains unidentified. The intensive cultivation proceeding all over this great and flourishing oasis is likely to have buried all ancient remains under deep layers of alluvial deposit, as explained in my former Report with reference to Yōtkan, the site of the old Khotan capital.[19] But the probability that the present Yārkand city is itself built on ground occupied by the ancient capital of So-ch'ê, or near it, is strengthened by a large find of coins (which was made some time before my stay) near the Ya-mên of the District Magistrate in the 'new city' of Yārkand. From it Pên Ta-jên, the learned Amban then in charge of the District, was kind enough to offer me a representative set of ten specimens. These comprise, as the inventory list prepared by Mr. J. Allan shows,[20] one copper coin with the legend K'ai-yüan as issued by Kao Tsu, the first emperor of the T'ang dynasty (A.D. 618–27), and by his successors for over a century, and various issues of the Sung dynasty, ranging from A.D. 990 to 1111. The composition of this hoard seems to bear evidence that the site of the present Yārkand city was already occupied towards the close of the pre-Muhammadan period.

Visit to site of Kizil-jai.

For my move from Yārkand to Karghalik, the next *étape* southward, I used on this journey a new and somewhat devious route which took me along a hitherto unsurveyed portion of the Tiznaf River. In Chapter XI of my personal narrative I have fully described it. Its choice was due to the wish to satisfy my archaeological conscience by a visit to the site of Kizil-jai, from which about two years earlier some fairly well-preserved manuscript records in Uigur script had been brought to Sir G. Macartney. They have since been under examination by Dr. E. Denison Ross, C.I.E.,[21] who was able to show me the originals on my passage through Calcutta in December, 1908. The antiquarian results of the excursion which I made on July 4 to the site from Bāgh-jigda, a small village on newly settled land near the right bank of the Tiznaf River (Map No. 11), proved scanty. After passing for about five miles northward through recently reclaimed cultivation, we entered an area of luxuriant scrub and jungle extending between the Tiznaf River and the moving sands on the east, and after another four miles or so reached a spot marked by a group of large wild poplars and known as 'Kizil-jai Mazār'. About half a mile north-west of it the discoverer of the Uigur records, a Bāgh-jigda tenant, Ibrāhīm by name, pointed out as their provenance one of those curious tamarisk-covered sand-cones which are a typical feature on the edge of the Taklamakān desert.[22] On closer examination I ascertained that more than ten years had passed between the discovery and the presentation of the documents to Sir G. Macartney. Ibrāhīm declared that he had come upon one small packet on the top close to the surface, while searching for dead wood or *kötek*, and then upon two more when clearing the sand some two yards lower, the total height of the sand-cone above the adjacent ground being about fourteen feet. How the several documents, all apparently of the same period, were found at greatly varying depths, seems difficult to explain, considering that these sand-cones are of relatively slow growth,[23] and that the difference in levels he named would indicate probably an

[17] See Chavannes, *Trois généraux*, pp. 25 sqq. (*T'oung-pao*, 1906, p. 233).

[18] Cf. *Tārīkh-i-Rashīdī*, pp. 256 n., 257, 296.

[19] See *Ancient Khotan*, i. pp. 196 sqq.

[20] Cf. App. B below.

[21] Dr. Ross has in preparation a full account of them.

[22] As to the origin and growth of these interesting formations, cf. *Ancient Khotan*, i. pp. 120, 458.

[23] For definite archaeological evidence on this point, furnished by a ruined shrine at the Farhād Bēg Site, see below.

interval of centuries. Here, as in the case of almost all chance finds of this kind in Turkestān which have not been followed up at the time, the only critical verdict can be *non liquet*.

Remains of Koilogh-ata.

Riding about two miles further north over waste ground covered with low scrub, I found numerous ruins of small mud-built houses scattered over an area which, by its clearly traceable irrigation channels, its terraced fields, the almost complete absence of drift sand, and similar indications was plainly marked as having been occupied down to a comparatively recent period. These remains, closely resembling the dwellings of modern villagers in these parts, were found in small detached groups extending for about a mile from north-west to south-east. The greater part of the locality was known to my guides as *Koilogh-ata*, while they gave the name of *Tatāri-zemīn* to its northern end. The survey effected two years later by my assistant Rai Bahādur Lāl Singh on his march from Merket to Karghalik showed that a small enclave of actual cultivation near the farms of Kököl and Lai-dang (see Map No. 11) reaches within a few miles of the ruins. These, no doubt, dated from a period when the narrow belt capable of irrigation between the desert edge and the Tiznaf River down to Merket had seen more continuous cultivation than at present. Sir G. Macartney had visited Koilogh-ata earlier in the year, and, stimulated by the find of the Uigur documents in this vicinity, had the rubbish in one or two of these humble dwellings cleared. But the only discovery rewarding his excavation was part of a leather slipper which of course, in the absence of dated relics, could afford no chronological fixing. So there was no inducement for me to spend time over further clearings.

Section V.—ALONG THE WESTERNMOST KUN-LUN

Stay at Kök-yār.

After traversing the large and flourishing oasis of Karghalik from north to south on July 6 and 7, I made my way south across the wide gravel glacis of the westernmost Kun-lun to the village of Kök-yār (Map No. 12) through which a much-frequented caravan-route passes to the headwaters of the Tiznaf and Yārkand Rivers and thus across the Kara-koram to Ladāk. The stay of sixteen days which I made at Kök-yār (July 9 to 24), and of which an account has been given in Chapter XII of *Desert Cathay*, was solely intended to secure me, at the foot of the mountains and thus in relative coolness, the peace needed for the completion of my last tasks in connexion with *Ancient Khotan*. These kept me so busy throughout that I felt almost glad for the absence of any archaeological distractions in the vicinity of this little submontane oasis. Yet the observations I was able to collect there and on my subsequent move eastwards along the foot of the mountains proved useful as regards both the ethnography and historical geography of this region. I shall offer some supplementary notes on the latter first.

Early Chinese accounts of Karghalik.

In *Ancient Khotan* I have already set forth in detail the reasons which induced me to identify Karghalik with the kingdom which Hsüan-tsang calls *Chê-chü-chia*, and which in the T'ang Annals and Sung Yün's itinerary figures under the variously spelt names of *Chu-chü-po* and *Chu-chü-pan*.[1] Now the special notice of the T'ang Annals states explicitly that this kingdom was the same as 'the kingdom of *Tzŭ-ho* of the epoch of the Hans. It has annexed and possesses the territory of the four peoples called *Hsi-yeh, P'u-li, I-nai* and *Tê-jo*.'[2] In the *Ch'ien Han shu* there are separate short notices of Tzŭ-ho, Hsi-yeh, P'u-li, and I-nai.[3] But the statements there made as to the relative positions, etc., of these localities show various discrepancies which cannot be satisfactorily cleared up without access to the original text. Thus we cannot conclude more for the present than

[1] Cf. *Ancient Khotan*, i. pp. 89–93; for the varying forms of the name cf. also Chavannes, *Voyage de Song Yun*, p. 19, note 4, and *Turcs occid.*, p. 366.

[2] See *Turcs occid.*, p. 123.

[3] See Wylie, *J. Anthropol. Inst.*, x. pp. 31 sq. Here, as elsewhere in the case of the important account of the 'Western Regions' furnished by Book XCVI of the *Ch'ien Han shu*, the need of a new translation by a critical scholar, familiar with the results of modern geographical and antiquarian researches, is sadly felt.

that these petty chiefships must have been situated close together near the present Karghalik. The passage about Hsi-yeh mentions that its ruler was called king of Tzŭ-ho; and in apparent agreement with this indication of a special connexion between the two places, modern Chinese geographers were prepared to identify Hsi-yeh and Tzŭ-ho with the closely adjacent village tracts of Yül-arik and Kök-yār.[4]

Oases of Kök-yār, Yül-arik, and Ushak-bāshi.

Hence it was of interest for me to be able to familiarize myself with the local conditions. At Kök-yār the area capable of cultivation is restricted to a narrow strip of ground less than half a mile across and under five miles in length, enclosed between absolutely barren slopes at the bottom of a narrow valley. The people, reckoned at about two hundred households, depend largely for their sustenance on cattle and sheep kept far away in the mountains. Nor is the configuration of the valley such that much extended cultivation can be assumed even for an earlier period when a moister climate prevailed. Conditions are somewhat more favourable at the small oasis of Yül-arik, situated at the mouth of the Akchik-jilga some six miles in a direct line eastwards. Here the whole irrigated area—and there did not seem to be any water to spare—was said to support about 260 households, including the village of Rōwush. Ushak-bāshi, the adjacent oasis eastwards, which receives irrigation from the stream known as Ulūgh-üstang and is fed by permanent snow-beds, appeared to be slightly larger and was reckoned at over 300 households.[5] Fertile as the thin cover of loess is, which overlies the Piedmont gravel beds at this little cluster of oases, it seems difficult to suppose that, situated so near to each other and so limited in resources, they could ever have figured as separate 'kingdoms'. A glance at the map (No. 12) will help greatly to strengthen this doubt; for it shows how relatively small is the cultivated area of these submontane villages when compared with the fertile expanse of the main Karghalik oasis.

Karghalik in Later Han Annals.

In view of the topographical conditions it may be safely asserted that Karghalik, with its ample supply of water from the Tiznaf River and its thick and fertile loess terraces, must always have been the most populous and important of the oases south of the Yārkand river. It is impossible to assume that it can have remained without mention in the Chinese survey of which the Han Annals have preserved us a record. An explanation of the apparent omission is afforded by the more lucid notice which Chap. CXVIII of the Later Han Annals contains of these territories.[6] There it is stated that travelling from Khotan by the route leading westwards 'one passes through P'i-shan and arrives at Hsi-yeh, Tzŭ-ho, and Tê-jo'.[7] That all these must be looked for in the vicinity of Karghalik is clear; for the identity of P'i-shan with the present Gūma is certain,[8] and the route thence westwards necessarily leads to what is now the Karghalik district.

Of the kingdom of Hsi-yeh 西夜 it is stated that it also bore the name *Lu-sha* 勝沙, and that it had then a ruler distinct from Tzŭ-ho, 'the [*Ch'ien*] *Han shu* stating wrongly that Hsi-yeh and Tzŭ-ho are a single kingdom. The king of *Tzŭ-ho* 子合 has his residence in the gorge of *Hu-chien* 呼犍 at a thousand li's distance from Su-lê (Kāshgar).' Both the distance indicated and the situation in a confined valley point to one or another of the submontane oases south of Karghalik as the Tzŭ-ho capital here referred to. Accepting this location we are necessarily led to identify *Hsi-yeh* as Karghalik; for only on the assumption that this great oasis is meant can we account for the striking difference in population which the notice of the Later Han Annals indicates by stating the number of households as 2,500 at Hsi-yeh and only 350 at Tzŭ-ho. This proportion is about the same as a modern census would be likely to reveal between the

[4] Cf. Chavannes, *Voyage de Song Yun*, p. 19, note 4.

[5] For a description of this tract cf. *Desert Cathay*, i. pp. 152 sq.

[6] See Chavannes, *Pays d'Occident*, pp. 28 sq. (*T'oung-pao*, 1907, p. 174).

[7] Cf. *Ancient Khotan*, i. pp. 97, 103.

[8] See Chavannes, *Pays d'Occident*, p. 28 (*T'oung-pao*, 1907, p. 174).

oasis of Karghalik proper and the Bēg-ship comprising Kök-yār, Yül-arik, and Ushak-bāshi. The identification of Hsi-yeh with Karghalik is in striking agreement with the statement in the *Ch'ien Han shu* that Hsi-yeh joined P'i-shan on the east and So-ch'ê on the north; for Gūma and Yārkand are the neighbours of Karghalik on these sides exactly as here represented. If it is assumed that, at the time from which the notice of the Former Han Annals dates, Hsi-yeh or Karghalik had passed under the rule of a family originally holding the hill tract southward, the identification of Chu-chü-po with the Tzŭ-ho of Han times by the T'ang annalists becomes intelligible,[9] though their description of the territory shows clearly that the present Karghalik district is meant.

Location of *Tê-jo, P'u-li, I-nai.*

As regards the 'kingdom of *Tê-jo*' 德若 which the Later Han record describes as a territory adjoining Tzŭ-ho and of identical customs, with a population of only a hundred households, it is safe to assume that it must be looked for among the several inhabited hill tracts to the west and south-west of Kök-yār. On the upper Tiznaf River, about Gusos, and in the valleys of the five streams which feed it, collectively known as Bēsh-kant, there are fairly numerous settlements of semi-nomadic hillmen which I shall presently have occasion to speak of. The exact location of *P'u-li* and *I-nai*, the other small territories which Chu-chü-po or Karghalik had absorbed in T'ang times, cannot be determined at present. But the mention made in the *Ch'ien Han shu* of their position north of Tzŭ-ho, and of their dependence on So-ch'ê or Yārkand for agricultural produce, suggests that they may represent the isolated hill settlements found in those little accessible valleys like Asghan-sal, Öch-bēldir, Tong, which are drained by the middle course of the Zarafshān, or Yārkand, River, and the topography of which was first satisfactorily cleared up by Captain Deasy's surveys.[10]

Hillmen of Pakhpu.

Fully occupied as I was with desk-work during my stay at Kök-yār I managed there also to secure useful anthropometrical and other information about the hillmen of Pakhpu, on the Tiznaf headwaters, in whose racial type and origin I had long been interested. In *Ancient Khotan* I had, on the basis of the scanty data then available, called attention to the important ethnic link which that small and little-known hill-tribe presented between the Īrānian Sarīkolīs and the actual population of Khotan and the other oases along the southern edge of the Taklamakān.[11] I had also discussed there at length the manifold evidence, anthropometric, linguistic, and historical, convergently pointing to the fact that the Galcha type of the *Homo Alpinus*, of which the Sarīkolīs are now the easternmost representatives, had once extended much further to the east and constituted the prevalent racial element in the ancient population of Khotan and the oases linked with it in culture and history. In the course of the journey which my present volumes describe, I used every opportunity to collect fresh anthropometric materials which would help to throw light on this and kindred questions connected with the ethnic character and origin of the population now settled in the Tārīm Basin and particularly in its southern part. But the very abundance of these new materials has made their systematic analysis by Mr. T. A. Joyce, who once more offered his highly valued collaboration, a protracted task, and until his results from the new measurements, taken on over six hundred individuals, are published, it would be premature for me to resume the inquiry as a whole. I shall therefore restrict myself here and in similar cases to a record of such general ethnographic observations as will account for the character of these materials and may help their full use hereafter.[12]

[9] See Chavannes, *Turcs occid.*, p. 123.

[10] Sung Yün and probably also Fā-hsien passed through these hill tracts on their way from Karghalik to Sarīkol; see *Ancient Khotan*, i. pp. 28 sq., with note 13, for references to the available topographical materials.

[11] Cf. *Ancient Khotan*, i. pp. 26 sq., 91, 145 sq.

[12] [Since the above was written Mr. Joyce's 'Notes on the physical anthropology of Chinese Turkestan and the Pamirs'

Homo Alpinus type of Pakhpu people.

The small semi-nomadic settlements generally designated as *Pakhpu*,[13] from the name of their chief valley, are scattered along the several high and narrow valleys which the headwaters of the Tiznaf River drain. The point near which all these streams meet lies to the south-west of Kök-yār and behind a high spur descending from the westernmost Kun-lun.[14] Unfortunately, want of time made it impossible for me to visit this little-known mountain tract. But with the efficient help of the Karghalik Ya-mên I managed, in spite of the difficulties caused by the flooded state of the streams and still more by the shy and suspicious nature of the hillmen, to secure at Kök-yār visits from representative batches of 'Pakhpuluks' (Fig. 23). I was greatly interested to note that the general impression conveyed by the appearance of my visitors, mostly fine-looking men, was that of a race homogeneous and showing close resemblance to the *Homo Alpinus* type as known to me from Sarīkol and Wakhān. The prevalence of fair and medium-coloured eyes, narrow aquiline noses, closely-knit eyebrows and generally abundant growth of hair distinctly separated them from the usual stock of the Yārkand and Karghalik population. Though there was nothing to distinguish them in dress or general bearing, I soon was able to pick out any Pakhpu visitor from the midst of local villagers who usually crowded around to watch the anthropometric proceedings. Only a careful comparison of the exact measurements taken with those subsequently obtained among people of Kök-yār, Khotan, and other southern oases can show to what extent my impression was justified. But at the time the idea strongly suggested itself that alpine isolation had preserved in these hillmen representatives of that population, mainly Galcha in origin and as yet but little affected by amalgamation with other blood, which in pre-Muhammadan times appears to have extended right through to Khotan and even farther eastwards.

Valleys and population of Pakhpu tract.

The alleged distinct language of which I had heard at Karghalik on my passage in 1901, proved a fiction or at least a thing of the past; for neither the offer of reward nor the fear of further inquiries I might be induced to make in their own hills, would induce my visitors from Pakhpu to own that they knew aught but their 'Tāghlik' or hill Turkī dialect. But on other points I was able to obtain useful information from the more intelligent men among them. Thus I ascertained that the hill tract collectively known by the designation of *Bēsh-kant*, 'the five villages', and containing a closely allied population, is reckoned to comprise the valleys of Pakhpu, Chukshü, Bulung, Yulung, and Chöp. The last named is drained by a stream which falls into the Yārkand Daryā below Tīr.[15] The administration is carried on by a Bēg residing in Chukshü. In all the valleys oats and other crops suited to the high elevation are grown, Chukshü possessing most of this scanty cultivation. But the chief support of the hillmen are their herds of yaks and sheep, and as Pakhpu owns by far the most extensive grazing-grounds in the side-valleys of Ulūgh-yailak, Kūda, Chirak-saldi, Tur-agil, Tāsh-kurghān, it is also, in spite of very limited cultivation, the most populous and important of the five alpine communities. Of *ak-ois* or felt tents which seem to serve as the usual habitations, sixty-five were counted in Pakhpu, with five to ten people in each. But there seemed reason to suppose that the number was considerably under-estimated. In any

have been published in *J. Anthropol. Inst.*, xlii. pp. 450–84. They will be reproduced below in App. C. Here it will suffice to mention that the people of Pakhpu show close relationship with the Sarīkolīs and are classed by Mr. Joyce with the latter in the Pāmīr group; *loc. cit.*, pp. 459 sq., 462.]

[13] Though I had heard at Karghalik and elsewhere the name *Pakhpu* loosely used of the people of the whole hill tract in the fashion which Dr. Bellew's notes reflect (*Yarkand Mission Report*, pp. 61 sq.), yet the men, both from Pakhpu and Kök-yār, I examined agreed that the term designated properly only the chief valley of these hillmen, and that the latter were correctly known as *Pakhpuluk* (*luk* being the usual adjectival affix of Turkī).

[14] See Dr. Hassenstein's map appended to Hedin, 'Reisen in Z.-A.,' *Petermanns Mittheilungen*, Ergänzungsheft, No. 131, 1900.

[15] See Captain H. H. P. Deasy's *Map of Western China and Tibet*, No. 3.

case, it deserves to be noted that the annual taxes payable into the Karghalik treasury on account of sales of animals alone were assessed at twelve 'Yambus' or horseshoes of silver, corresponding to about Rs. 1,500,—not counting the Bēg's additional octroi. In the days before Hunza came under effective British control (1891), the Pakhpu valleys were a favourite hunting-ground for Kanjūtīs raiding across the Shimshāl Pass for cattle and slaves. Not less than 170 Pakhpuluks had thus been carried off within living memory and never heard of again.

Hsüan-tsang's legend of Arhats.

On two points the information obtained from my Pakhpu visitors presented some antiquarian interest. Hsüan-tsang tells us, evidently from stories heard on his passage,[16] that there was on the southern border of the kingdom of Chê-chü-chia, or Karghalik, 'a high mountain with very elevated passes and peaks piled up one above the other. Plants and trees are stunted by the cold. From spring to autumn the torrents of the valleys and the mountain sources spread on all sides. There one sees niches in the flanks of the mountain, and cells among the rocks. They are disposed in a regular fashion among the grottos and woods. Many Indians, having obtained Arhat-ship, display their supernatural faculties, rise into the air to travel afar, and come to settle in these places. A multitude of Arhats have entered Nirvāṇa there. On that account a great number of Stūpas have been constructed. Even now there are three Arhats residing in these rock caverns. They are plunged in the state of ecstasy producing "extinction of mind". Their bodies are shrivelled; their beards and hair continue to grow, so that monks come from time to time to shave them.' There can be no doubt that the story here recorded by Hsüan-tsang rested on old local tradition, for the same account of the miraculous Arhats was heard already by the Indian Buddhist traveller Jinagupta when he passed through Chê-chü-chia about A.D. 556 on his way from Gandhāra to China.[17] It is equally clear that the legend must have been localized at some natural rock caves.

Local worship at caves in Pakhpu Mts.

It was, therefore, of special interest to me to learn from my Pakhpu visitors that there are at least four well-known caves in their mountains, and that two, if not all of them, are looked upon as Mazārs, and thus sites of local worship. One, said to be 'large enough to hold over 200 sheep', is situated near the point where the Karā-kāsh Jilga debouches into the main valley of Pakhpu, and is held sacred as the resting-place of a saint, 'Sultān Köputwali'. Another cave exists at Kulān-arghu, a place apparently to be located at the head of the high valley between the Takhta-koram and Kukalyang Passes. A third, in the Küda Valley, is passed by the route from Kök-yār to the Yangi-dawān. It was particularly curious to hear of a small cave in Chukshü, near the head of the valley leading to the Yangat (*Yangi-art?) Pass, which is looked upon with much awe by the hill-men as the resting-place of a miracle-working Faqīr who had died there 'in old times'. By their position and sacred character these caves seem to correspond closely to the sites which figured in the legends heard by Jinagupta and Hsüan-tsang, and thus to furnish a striking fresh instance of the survival of Buddhist local worship in these parts. Nor need Hsüan-tsang's reference to woods in this region appear as strange as the now generally barren appearance of these mountains might suggest. For, rare as tree growth must be under their present climatic conditions, Rai Rām Singh on the surveys for which I had dispatched him towards the Karlik-dawān, actually discovered considerable fir forest still surviving in the Akchik Valley between Tātligh and Tarishilagh-öghil, at an elevation close on 10,000 feet.[18] Nowhere else in the Kun-lun do I know of firs or similar tree growth. The discovery of this forest accords remarkably well with the peculiar luxuriance of trees in the Karghalik oasis. This might, perhaps, be due to a local climate rendered less dry by

[16] See Julien, *Mémoires*, ii. pp. 221 sq.; Beal, *Si-yu-ki*, ii. p. 308.

[17] Cf. M. Chavannes' paper on Jinagupta in *T'oung-pao*, 1905, pp. 332 sq. His narrative, apparently more detailed than Hsüan-tsang's, was heard and recorded by a Chinese contemporary who inserted it in a Buddhist treatise published A.D. 597.

[18] See Map No. 12, B. 4.

remnants of monsoon moisture passing here across the high mountains.[19] In view of the desiccation so plainly proved elsewhere by archaeological evidence in the Tārīm Basin, it seems but reasonable to suppose that in earlier times forest was not altogether so exceptional in the mountains south of Karghalik as it now is.

Jade in Pakhpu Hills.

There is another local fact which deserves passing notice with regard to the historical topography of this region. My Pakhpu informants were well aware of a place near the junction of the Yulung and Chukshū Valleys where jade used to be regularly quarried from the hill-side 'in the old Khitāi times', i. e. before Yāqūb Bēg's rebellion. Now the record of the Former Han Annals speaks distinctly of Tzŭ-ho as a territory producing jade.[20] We have seen above that the name Tzŭ-ho is likely to have originally applied to the submontane group of oases comprising Kök-yār and its neighbours. The Pakhpu tract has its easiest approach from the side of Kök-yār, and must always have been closely linked with it. Thus the mention of its jade in connexion with Tzŭ-ho becomes quite intelligible and helps to confirm still further the location proposed for this territory.

Route along foot of Kun-lun.

From Kök-yār I made my way to Khotan between July 25 and August 5 by the little-known route which passes along the foot of and through the barren outer hills of the Kun-lun. I had chosen this track, instead of the high road followed on my previous journey which leads by the edge of the desert,[21] mainly for the chance of fresh surveys it gave me. It allowed me to visit in succession the oases of Kiliān, Sanju, Duwa, all resting at the debouchure of snow-fed streams destined to lose themselves further down in the desert, and proved, as Chapter XIII of my personal narrative shows,[22] in various ways geographically interesting. Incidentally the journey gave me complete proof that this submontane route, owing to its length and the nature of the ground it traverses, could not possibly be the one which Hsüan-tsang followed to Khotan.[23] But otherwise there was little opportunity here for archaeological observations.

From the large and flourishing oasis of Sanju, which forms an important adjunct of Gūma, the ancient *P'i-shan*, I reached on July 31 the debouchure of the Puski Valley (Map No. 16, C. 4). At the long-stretched settlement of about forty households which extends along the scanty stream of Puski, I first heard of a 'Tim', or ancient mound, situated to the north on the route to Zanguya. According to the report of the local greybeards it had been repeatedly dug into, on the last occasion by three men of Puski, who all died shortly thereafter! So it was easy to guess that it was the ruin of a Stūpa. As the distance proved too great, I had to leave my visit for the next day.

'Tatis' near Puski.

Riding along the left bank of the stream, which, characteristically enough, carried even at that season only 'Kara-su', or spring water, there being no permanent ice or snow at its head, I reached, after about two miles, a colony of five or six households, founded about twelve years before and known as Jangal-bāgh. It was interesting to find here, just below the area of new cultivation and partly within it, a small 'Tati', one of those wind-eroded old village sites which are such typical marks for the extent of ancient oases along the southern edge of the Tārīm Basin. Their characteristic features I have fully discussed in *Ancient Khotan*.[24] The Jangal-bāgh 'Tati' proved about three-quarters of a mile long and a quarter across. The ground, a soft loess, was thickly covered with fragments of ancient pottery of bright red colour and mostly of fine texture and remarkable hardness. Representative specimens brought away, some with lightly incised wave patterns, are described

[19] Cf. *Desert Cathay*, i. p. 140.

[20] Cf. Wylie, *J. Anthrop. Inst.*, x. p. 32.

[21] See *Ancient Khotan*, i. pp. 95 sqq., for a full account of this route.

[22] See *Desert Cathay*, i. pp. 152 sqq.

[23] I have fully discussed Hsüan-tsang's route in *Ancient Khotan*, i. pp. 98 sq. The distance from Kök-yār to Khotan town proved by actual road measurement about 183 miles and would be slightly greater from Karghalik by the same route. This distance is greatly in excess of the 800 li reckoned by Hsüan-tsang from Chê-chü-chia to Yōtkan, the ancient Khotan capital; cf. also *loc. cit.*, note 16.

[24] Cf. *Ancient Khotan*, i. pp. 107 sqq.

below.[25] More of this 'Tati' had been reclaimed for cultivation when the new colony was established, and this process was still going on at the time of my visit. As there seemed to be sufficient water for further irrigation, it can only be a question of time before the rest of the old village site disappears again under fields and the deposits of loess dust which steadily accumulate over all cultivated areas of this region. The absence of datable remains such as coins makes it impossible to fix chronologically the abandonment of the site. But, judging from the character of the pottery and the height of the wind-eroded loess-banks or 'witnesses', 8 feet to 10 feet, it must go back to pre-Muhammadan times.

Ruined Stūpa of Puski.

Beyond this 'Tati' the road leads over a barren 'Sai' of gravel, overlooking the broadening bed of the stream and sloping away glacis-like towards the oasis of Zanguya. The ruined mound, visible from afar on this absolutely bare ground, rises at a point about six miles below Puski 'Langar' and half a mile from the left bank of the stream. The track to Zanguya still actually passes by it. The structure of sun-dried bricks, resting on a square base and originally, no doubt, surmounted by a dome, proved greatly injured by diggings for 'treasure'. Its extant height from where the clay brickwork rests on the gravel 'Sai' was only 13 feet. Galleries had been run into the mound from three sides, and a shallow cavity had been dug out on its top. On the badly broken surface no definite indications survived of the arrangement of the base and the dome; but the lowest base appeared to have measured about 34 feet square, and the superstructure may well have resembled that of the Stūpa of Tōpa-tim which I discovered in 1900 between Gūma and Moji,[26] though the base was manifestly much lower. The bricks, made of clay with a plentiful admixture of straw and chaff, measured on the average 17 inches by 14 inches, with a thickness of 3–4 inches.

At a height of 4 feet from the ground the north and west sides showed a level row of tamarisk and willow sticks set close together, and once probably supporting a projecting cornice in plaster. The sticks were about one foot long and very firmly embedded.[27] Examining the foot of the mound, I convinced myself that the foundation rested on soil exactly the same as that displayed by the surface of the surrounding 'Sai' and on the identical ground level. This proves that this gravel glacis is not perceptibly affected by wind erosion, an observation which is in exact agreement with the results of my subsequent examination of the desert ground near most of the ancient Limes west and north of Tun-huang.[28] It was curious to find the brick débris of the lower slopes covered on its surface with small pebbles, evidently driven on to the mound by the force of the winds which sweep across this glacis with great force from the side of the desert during the spring and summer. Perhaps it is to this powerful corroding agent that we must ascribe the state of far greater decay which this

[25] **Puski 001. Fr. of dark red pottery** orn. with appliqué band of clay deeply punched at short intervals; above and below this is wave pattern irregularly scribbled. $4'' \times 3\frac{3}{4}''$.

Puski 002. Fr. of pottery, very hard-fired, dark red, with band of lightly incised wave pattern. $2\frac{15}{16}'' \times 2\frac{1}{4}''$.

Puski 003. Fr. of pottery, as Puski. 002, but thinner. $3'' \times 2\frac{1}{16}''$.

Puski 004. Fr. of hard-fired red ware, lip of vessel; rim projects slightly, sloping sharply downwards. $3\frac{1}{8}'' \times 1\frac{5}{16}''$.

Puski 005. Fr. of pottery, hard-fired, dark red with smooth outer surface. $2\frac{1}{4}'' \times 1\frac{5}{8}''$.

Puski 006. Fr. of dark red pottery, with very thin friable sand-coloured slip; clay hard-fired and gritty. $2\frac{9}{16}'' \times 1\frac{13}{16}''$.

Puski 007. Fr. of pottery, hard-fired, gritty, dark red; orn. with rough incised pattern on outer face. $2'' \times 1\frac{11}{16}''$.

Puski 008. Fr. of pottery; neck and rim of vessel; rim runs sharply down from lip and in very slightly undercut. $2\frac{3}{16}'' \times 1\frac{15}{16}''$.

Puski 009. Fr. of dark red ware, very hard-fired; has smooth reddish-brown slip over outer face. $2\frac{1}{16}'' \times 2\frac{1}{16}''$.

Puski 0010. Split piece of willow from plaster support; bark extant on outer surface; one end new cut. $6'' \times 1'' \times \frac{1}{2}''$.

Puski 0011. Split stick of tamarisk; bark partly extant. $5'' \times 1'' \times \frac{3}{8}''$.

[26] Cf. *Ancient Khotan*, i. pp. 104 sq.; ii. Pl. XIX.

[27] For specimens, see list in note 25.

[28] See below.

Stūpa ruin exhibits as compared with the Tōpa-tim and similar remains that are surrounded by loess soil or fine sand disintegrated from this.

Continuity of local worship.

Nowhere around the mound could I trace any mark of ancient habitation. The bare gravel 'Sai' showed not even fragments of old pottery, the most lasting indications of early occupation. Hence it is clear that the Stūpa must have risen then as it does now, on the bare 'Dasht' by the route between Puski and Zanguya. Half a mile to the east of it flows the stream of Puski in a wide bed of rubble and sand, and just across the latter there stands a modest mud-built Mazār, held sacred as the resting-place of a legendary Imām 'Alī Akbar, evidently the inheritor of the sanctity once enjoyed by the Stūpa, and another instance of the continuity of local worship in these regions.

Mounds near Duwa.

During the following marches, before I reached familiar ground again, it was only at one point that I came across old remains. I had heard already at Puski of a 'Tim' below the oasis of Duwa, and when descending from there on August 3 by the route towards Piālma I was shown it standing on a steep conglomerate hill. This is known as Lāmus-kīr and overlooks the northernmost cultivated ground of Lāmus village, rising about 200 feet above the right bank of the Duwa River. It proved a mound, about 10 feet high and 25 feet in diameter, roughly built of layers of stone and earth with plentiful twigs and brushwood interspersed. The material and manner of construction recalled the burial-mounds of Tüga-dong I had examined in 1901 to the south of Domoko.[29] Whether it also resembled the latter in its character and purpose the rapid inspection I was able to make does not allow me to state. Want of time did not permit me to visit another, and apparently larger, mound on a steep ridge flanking the river bed on the opposite western bank. According to my local informants, its manner of construction was the same, and observation through my glasses seemed to support this statement. It is, perhaps, significant that at neither point did I hear of any adjacent Mazār. That evening, after a long and trying march described elsewhere, I had the satisfaction of resting once more at Kum-rabāt Pādshāhim, the quaint desert shrine which marks Hsüan-tsang's site of the sacred rats and the western limit of the ancient Khotan kingdom.

[29] See *Ancient Khotan*, i. pp. 465 sq.

CHAPTER IV

REMAINS OF THE KHOTAN OASIS

Section I.—OLD SITES WITHIN THE OASIS

The great oasis of Khotan, to which I returned on August 5, 1906, after an absence of over five years, had been the centre and base of my archaeological work on the former journey. After all the attention and labour which I then devoted to the study of its ancient topography, history, and extant remains, and of which the results have been fully recorded in Chapters VI–VIII of *Ancient Khotan*, it was obvious that the short stays which I made at Khotan town in August and again in September, 1906, could serve only for the collection of information from local 'treasure-seekers' about possible desert sites awaiting exploration beyond the oasis, and for preparations for travel further afield. Hence what I have to record here is confined to a few supplementary observations about remains still visible above ground, and to a short account of such acquisitions of antiques as I was able to make from Yōtkan, the site of the ancient Khotan capital. Stays at Khotan.

To take the observations first, I may mention that, when marching from Karā-Kāsh town to the city of Khotan by the direct route I had not previously visited, I came across unmistakable indications of a 'Tati', i. e. the wind-eroded ground of ancient occupation, by the eastern edges of the narrow tongue of sandy desert, known as *Balamās-kum*, which projects into the oasis from the north between the irrigated lands of Sipā and Laskuya (Map No. 20). The red pottery débris strewing the ground, where not covered by dunes, looked decidedly old, and proves that cultivation in ancient times was continuous in the northern part of the oasis between the Karā-kāsh and Yurung-kāsh Rivers. It is probable enough that the cultivated area then extended in this direction considerably beyond the line marked by the present outposts of the main oasis, the villages of Yangi-arik on the Yurung-kāsh and Sarīgh-yez by the Karā-kāsh. At the time of my visit steady expansion was taking place in the cultivated ground of the oasis, mainly, it seemed, owing to improved economic conditions and increased population. It was significant evidence of this process, to which I have had repeated occasion to call attention in my personal narrative,[1] that the desert enclave of the Balamās-kum was then undergoing rapid reduction by irrigation channels brought to its edges for the sake of new fields. Thus the 'Tati' referred to is bound to disappear soon under fresh cultivation and to be hidden more and more by the steady accumulation of fertile loess which accompanies all irrigation in this region.[2] 'Tati' of Balamās-kum.

I could see this process illustrated also at the extensive 'Tati' area south of Jamada village, which a canal newly opened is helping gradually to reclaim. The same change was said to be taking place at the large site of Chalma-kazān some four miles higher up by the left bank of the Yurung-kāsh, where the big débris-strewn waste I had seen in 1900 was being brought under cultivation again.[3] Reduction of 'Tati' areas.

[1] See *Desert Cathay*, i. pp. 164, 169, 230, 251; ii. p. 416.

[2] Cf. *Ancient Khotan*, i. pp. 196 sqq.

[3] For these sites, cf. *ibid.*, i. p. 233.

Between August 11 and September 8, 1906, I was kept away from Khotan by the expedition which took me into the mountains south for the sake of topographical explorations in the ice-crowned Kun-lun range above Nissa and Karanghu-tāgh. Of these I have given an account in my personal narrative.[4] But the first march, by which I reached Lānghru, on the right bank of the Kara-kāsh River and at the foot of the mountains, provided opportunities for new antiquarian observations, even though I had passed over most of the ground before. Directing my way first to Yōtkan, the site of the ancient Khotan capital, I revisited the marsh of Aiding-kul and the mound of Naghāra-khāna on its southern bank. As I have shown at length in *Ancient Khotan*, there are strong reasons to locate at this mound the ruined convent by 'the drum-lake', about which Hsüan-tsang has preserved a curious ancient legend.[5]

Remains at Naghāra-khāna.

At the time of my visit in 1900 luxuriant beds of reeds covered the ground here, as elsewhere in the vicinity of the marsh, and rendered close examination of the mound difficult. But now the rapid spread of cultivation had converted the whole ground into fields, just as over most of the former waste known as *Shōrluk* which once extended between the Aiding-kul and Khotan town. The change had resulted in a considerable reduction in the size and height of the mound, the earth being carried off for manuring. But the cuttings thus effected made it easy now to see that the mound (Fig. 37) consisted of regular layers of stamped clay, i.e. loess soil, each about seventeen inches high. The small irrigation cuts skirting the foot of the main mound and of a much smaller one some thirty yards eastwards had laid bare abundant débris of ancient pottery, closely resembling that found in the 'culture strata' of Yōtkan.[6] Still more interesting it was to find fragments of very hard burnt bricks and large rubble embedded on the north side of the main mound in a layer some five to six feet above the present ground level. There could be no doubt that the mound had been occupied by structures at successive periods, and this further strengthens the conclusion that this mound had once borne the remains of the ancient convent which Hsüan-tsang saw as a ruin, and the legend of which has left a trace in the name of *Naghāra-khāna*, 'the drum house'.

The neighbouring 'Mazār of the Three Ghāzīs' attests the survival of local worship to the present day.[7] The Mullah in charge explained the intensive reclamation I found now proceeding by 'people getting too many and land less'. He himself had laid out some thirty Chinese acres quite close to Naghāra-khāna, and if this development of agricultural prosperity continues a generation or two may see the last trace of the site of Hsüan-tsang's convent disappear—and the 'drum-lake' itself reduced to a fertile depression; for cultivation has already begun to encroach on the reed-covered hillocks of sand which encircle the springs of the marsh.

Gold-washing operations at Yōtkan.

At Yōtkan the great pit-like area resulting from the long years of washing for gold and 'treasure' at the site of the ancient capital, showed but slight change since 1900.[8] A series of causes have tended to reduce the operations which have yielded as their by-product so many curious relics of ancient Khotan. In the first place, owing to the great increase of cultivated ground within the Borazān canton as elsewhere, it has become impossible to spare water from irrigation during the time of the summer floods, when the canals run full, for any extensive 'washing' operations. Moreover, on the north edge of the excavated area, near the hamlet of Khalche, where the 'paying' strata are known to extend still further,[9] the increased value of agricultural land, with its trees, farm

[4] See *Desert Cathay*, i. pp. 179–213.

[5] Cf. *Ancient Khotan*, i. pp. 227 sq.

[6] The following are the specimens of pottery brought away from Naghāra-khāna: **Nagh. 001.** Pottery fr. of hand-made vessel. Coarse red clay. $2\frac{1}{4}'' \times 1\frac{1}{4}''$. **Nagh. 002.** Pottery fr. in hard fine red clay, with smooth inner and outer surfaces. $1\frac{1}{2}'' \times \frac{7}{8}''$. **Nagh. 003.** Pottery fr. of base of hand-made vessel, in coarse reddish clay. $1\frac{3}{4}'' \times 1\frac{1}{2}''$. **Nagh. 004.** Fr. of terra-cotta. $2\frac{1}{4}'' \times 1\frac{1}{2}''$.

[7] See *Ancient Khotan*, i. pp. 228 sq.

[8] For a full account of the site and the peculiar working which its culture strata have undergone since the sixties of the last century, cf. *Ancient Khotan*, i. pp. 191 sqq.

[9] See *Ancient Khotan*, i. p. 199.

buildings, etc., stops further exploitation. The risk of injuring the canal which here skirts the excavated area, acts also as a deterrent as its water might break away and run to waste below. Finally there is the broad fact that with agricultural labour risen greatly in value the average profits produced by gold-washing at Yōtkan have ceased to be sufficiently attractive except for the least steady of workers. Thus at the time of my visit the number of men and children at work was only about a score, and the soil which they were washing was wholly confined to low banks of earth left unexploited from previous excavations. Since about 1901, I was told, these had scarcely been extended at all laterally. In spite of the restricted working the yield in small antiques, such as terra-cotta figurines, coins, cut stones, etc., still continued. This was proved by the relatively ample collection of such objects I was able to acquire that year both at Yōtkan itself and at Khotan and during my subsequent visits in 1908. I shall return to these acquisitions presently.

Mazār of Rukn-ud-dīn Ṣāhib at Yōtkan.

In view of the survival of local worship at practically all old religious sites in Chinese Turkestān, which are still within inhabited ground or near it, the absence of any prominent Muhammadan sanctuary at Yōtkan might well have caused surprise. For though no shrine of special importance is singled out for mention at the ancient Khotan capital itself by Hsüan-tsang, who has recorded such interesting legends about a number of Buddhist convents and Stūpas in its vicinity,[10] it is obvious that the city itself must have contained more than one sacred building of note. Hence it was gratifying to me when approaching the site this time from a new direction, to find that a locally well-known Mazār, that of Rukn-ud-dīn Ṣāhib, was established quite close to the south-eastern corner of the excavated area. Tradition ascribed to portions of the extant shrine an age of some three hundred years, and the fine old wood-carving in the mosque attached to the supposed resting-place of the saint, and the magnificent trees in the adjoining arbour, seemed fully to bear out this claim.[11]

Kohmārī Mazār revisited.

My way from Yōtkan to Lānghru enabled me to revisit the Kohmārī Mazār which marks, as recognized long ago, the sacred site famous in the Buddhist accounts of Khotan as Mount Gośṛinga, 'the Cow's Horn', or Gośīrṣa, 'the Cow's Head'.[12] Nothing had changed at the modest shrine where the Muhammadan saint who has succeeded to Hsüan-tsang's Arhat is supposed to rest, nor at the smoke-begrimed sacred cave below it overlooking the Karā-kāsh River. But a rough track had recently been built giving access to a small and precipitous gully which descends the face of the conglomerate cliff down to the river bank and could before be approached only over very rough ladders. On descending here I passed some two or three shallow grottos at an elevation of about a hundred feet above the river. Some sixty feet lower down I found about half a dozen more. They were manifestly natural, recalling the shelters in the rocks I had seen about Rājgir and Jēṭhian in Bihār, and might well have served, as the latter were supposed at one time to have done,[13] for the accommodation of holy mendicants and the like. From four to twelve feet deep, these grottos, when partially filled with débris from their rock walls, could well give protection to ancient relics. Thus the thought suggested itself whether it was not from one of them that those famous birch-bark fragments of the Dutreuil de Rhins MS. were originally obtained, the discovery of which was connected in 1892 with the Kohmārī cave itself.[14]

'Tati' beyond Nussia.

As I continued my way up the right bank of the Karā-kāsh River beyond the village of Nussia, I noticed at a distance of about one mile from the upper end of the latter that the banks of a small

[10] Cf. *Ancient Khotan*, i. pp. 223 sqq.

[11] For illustrations see *Desert Cathay*, i. Fig. 54; ii. Fig. 312.

[12] Cf. for this identification, *Ancient Khotan*, i. pp. 185 sqq.

[13] Cf. my 'Notes on an archaeological tour in South Bihār', *Ind. Ant.*, 1901, pp. 54 sqq.

[14] For my doubts as to the real provenance, see *Ancient Khotan*, i. p. 188.

ravine or 'Yār', through which the tract here passes, displayed a continuous layer of potsherds and similar 'Tati' débris, about six to eight inches in thickness. The present surface level of the ground, consisting of fertile loess deposits, rose four to six feet above this 'culture stratum'. There is no cultivation at present but only by its previous existence can the thick cover of earth be explained which now hides from the view the remains of some ancient settlement. A narrow fringe of cultivation extends by the side of the river bank to the hamlet of Faizābād, a mile further on, and at the entrance of this I was met by another sign of antiquity in the shape of a small and completely decayed mound known as 'Tim'. It measures about fifteen feet in diameter and rises about twelve feet above the road level. Being undoubtedly of artificial origin it may well mark the remains of a modest Stūpa.

Rock-cut tomb opposite Faizābād.

Opposite to Faizābād on the left bank perpendicular cliffs of sandstone, rising to a height of about 120 feet, with alternate strata of red and bluish-grey colour, overlook the river. During the summer months, when the river is in flood, their foot is quite inaccessible. Here at a height of about fifty to sixty feet the rectangular porch of a grotto is seen carved into the rock face. On revisiting the spot in April, 1908, I was able to cross the river and examine the cutting more closely from the left bank. The porch appeared to be about ten feet wide and eight feet high, with an approximate depth of six feet. At its back in the centre a low doorway, about five feet high and between three and four feet across, gives access to some interior grotto. It is surmounted by an arch resembling a truncated triangle. These modest dimensions suggest that the excavation is more likely to have been intended for a tomb than a shrine. There was no time then or later to arrange for the construction of a scaffolding which would make this curious grotto accessible. That it is of pre-Muhammadan date seems to me highly probable, and if that is the case attribution to either Nestorian Christians or Manichaeans naturally suggests itself. In this connexion it deserves, perhaps, some attention that the large village of Ujat, which lies by the left bank of the river some two miles below this spot and is widely famous for its grapes, appears to figure in late tradition as a place once inhabited by Nestorian Christians, or at least by people who were considered as insincere Muhammadans.[15]

Ruined fort near Lānghru.

From Faizābād a ride of some three miles over barren plateaus of stone and rubble overhanging the river brought me within sight of the easternmost fields of Lānghru when there appeared close on the right of the track the remains of a ruined fort. I had heard of this previously and of the popular tradition vaguely connecting it with a demon of old, known as 'Kōnsasmōma'. The walls, badly decayed, enclose an irregular quadrilateral which occupies the rim of a stony plateau in the angle between the right bank of the river and a dry boulder-filled ravine. The north-west side of the enclosure lies along the edge of the plateau where it falls away very precipitously to the river some hundred feet lower down. The wall to the north-east curves along the edge of the ravine with a length of about 300 feet. That to the south-east measures about 245 feet. Sun-dried bricks, full of gravel, about eighteen by twelve inches in size with a thickness varying from three to six inches, formed the material for the walls; these at their foot showed an average thickness of eight feet. Near what appears to have been the entrance on the south-east face, the walls still stood to a height of about fifteen feet. Rough in their construction, they yet looked decidedly old. But there were neither structural remains nor other relics within the walls to give any definite indication as to its relative age. So much, however, was clear that the little stronghold was intended to close the route leading down the Karā-kāsh Valley and those debouching towards it from the mountains south.

[15] For Ujat, cf. *Ruins of Khotan*, p. 247. The somewhat scanty indications as to the 'Ujatliks' having been originally Nestorian Christians are discussed by Dr. Hoernle in *J.A.S.B.*, 1899, Extra No., p. xxxii; cf. also *Yarkand Mission Report*, p. 127.

Section II.—ANTIQUES ACQUIRED FROM YŌTKAN AND AT KHOTAN

As on my previous journey, I endeavoured, during my successive visits to the Khotan oasis in 1906 and again in 1908, to secure any antiques that were to be found either among the villagers engaged in the gold-washing operations at Yōtkan or in the hands of those local agents who are in the habit of collecting such objects as ancient coins, cut stones, decorated pottery, etc., which find their way into the Khotan Bāzārs. It is certain that the latter receive the main portion of their abundant supply of small antiques from the annual operations at Yōtkan, and only relatively little from chance finds made by the 'treasure-seekers' who make a practice of visiting the eroded old sites around the oases during the winter months.[1] It has therefore appeared convenient to treat all the antiques which I obtained by purchase while at Khotan in one place.

Provenance of antiques acquired at Khotan.

All objects acquired by me either personally or through my trustworthy local factotum Badruddīn Khān, the headman of the Indian and Afghan traders, as avowedly coming from Yōtkan bear the distinguishing mark of *Yo.* in the descriptive list given in the section following. But even in the case of these objects the evidence as to their provenance can obviously not claim the same value as if they were finds resulting from systematic exploration on the spot. As regards antiques acquired through other channels there is still greater need for caution before making any individual piece a basis for antiquarian argument.

Yet with this reservation once made it is easy to recognize that the great mass of the objects are genuine relics left behind by the civilization which flourished during Buddhist times at the ancient capital of Khotan. So closely do they agree in character, style, and material with the contents of collections previously secured from the 'culture-strata' of Yōtkan.

Previous collections.

Among these collections the purchases successively made for the Indian Government had already in 1901 received very learned and exhaustive analysis by Dr. Hoernle.[2] The acquisitions of Yōtkan antiques resulting from my previous journey represented a considerable addition to our materials. Yet their resemblance in general character was so great that in *Ancient Khotan* I was able to restrict myself, apart from the detailed entries furnished by the descriptive list of Mr. Fred. H. Andrews, to brief explanatory notes on the plates which reproduced all characteristic specimens.[3]

Description of new collection.

The objects acquired by me during 1906–8 form a collection greatly exceeding in numbers that brought back from my first Khotan journey. But the uniformity in the types of antiques represented is still as great as before, and this fact alone, I think, would have justified succinct treatment even if limitations of time and space did not impose this restraint. In the descriptive list in the following section, which owes much to Mr. C. L. Woolley's careful revision, an attempt has been made to secure as far as possible condensation by classified grouping, and at the same time to indicate such points as may help systematic detailed study hereafter. In the plates illustrating Yōtkan antiques it has been necessary to restrict reproduction mainly to objects which either show departure from previously known types or else help to explain the classification adopted in the case of such abundant materials as pottery ornaments, terra-cotta figurines, etc. Finally, my remarks here are meant merely to serve as a rapid synopsis of the different types of antiques represented and to direct attention to any objects of special interest.

Yōtkan pottery.

The 'culture-strata' of Yōtkan owe their origin to the natural accumulation of débris at a site continuously occupied for centuries. Taking into account the fact that such building materials as old Khotan knew in the shape of sun-dried bricks, stamped clay, or timber and wattle, are

[1] See *Ancient Khotan*, i. p. 203.
[2] Cf. *Report on C.-A. Antiquities*, ii. pp. 42–55.
[3] Cf. *Ancient Khotan*, i. pp. 206 sqq.; ii. Pl. XLIII–L.

all bound to decay completely in a soil kept damp by constant irrigation, it is easy to realize why among the remains brought to light by the operations at Yōtkan ancient pottery should form the most substantial item. Once broken it was bound to be left where it lay, as rubbish without value, and yet, by the nature of its material, it was proof against any further injury. But vessels meant for actual use would but rarely, while intact, find their way into the protecting layers of débris, and this explains the interest attaching to the practically complete specimens which the new collections contain. Yo. 01. a (Plate IV) is an amphora of fine red clay which retains most of its rich appliqué decoration. Of plain jugs (Yo. 00177; Khot. 00101, 00102) the same plate furnishes an illustration, as well as of a small jug, Yo. 0060, bearing decoration in incised lines and showing Greek influence in its shape. Of miniature vessels in varying shapes (Yo. 0014. a–c, 0039. b–d, f, 0055. c, d, 0069, 00129) Plate III reproduces specimens. The handles, usually double in these miniature models, must very often, in the full-sized amphoras and jugs, have been given the shape of grotesque animals to account for the large number of such decorative pieces found detached (Yo. 0015. f–l, 0023. d, 0030. b, 0039. i, 0045. e, g, etc.; see Plate II). Animals served also as spouts, as seen from Yo. 0023. a, etc. (Plate II). A curious vessel of uncertain purpose, perhaps meant for a censer, is seen in Yo. 00178 (Plate IV).

Appliqué decorations.

The usual ornamentation of vases consisted of moulded appliqué pieces. Having been made separately and attached before firing, these would break off easily. This explains the abundance of the grotesque masks which seem to have been the favourite decoration. Human faces from a considerable variety of moulds are seen in Yo. 001. a–v, 0020, 0024. a–n, 0044. a–f, etc. (Plates I, III). In some cases the expression and setting display unmistakable descent from the 'Gorgoneion' type, e.g. in Yo. 0012. a (Plate III), Yo. 0043. a (Plate IV). Among the animal masks those with a lion's face are most common (Yo. 0012. b–k, 0025, 0027. b, 0043. b–f, etc.; see Plate II). But the ram's and mastiff's heads are also represented (Yo. 0012. l, 0058; Plate II). Whole figures or even groups are also met with among these appliqué vase decorations (e.g. Yo. 0021, 0059, 00184, etc.; Plate I). A favourite motif is the garland-holding female figure meant for a Gandharvī which is so frequent also elsewhere in the decorative art of old Khotan (Yo. 0018. a–c, 0040, 0042. a, 00194, etc.; Plate I). Among other subjects in vase ornamentation which Plate I reproduces, the fragment Yo. 0039. l is of particular interest, as it reveals that worship of Buddha's alms-bowl, which is a scene so frequent in the sculptural art of Gandhāra and is here treated in an almost identical fashion. This influence of Graeco-Buddhist art is most strikingly demonstrated by the terra-cotta fragment, Yo. 02 (Plate I), once forming part, perhaps, of an exceptionally large vase, which shows two musicians playing under the arcade of some structure. Here all the details of the elaborate architectural setting, including 'Buddhist rail' and Indo-Corinthian column, look as if borrowed directly from some Gandhāra relievos. In view of such intimate connexion with the architectural style of Gandhāra it can cause no surprise to meet also with such unmistakable classical elements as the palmette, acanthus, and anthemion (see Yo. 01. c, 0023. c in Plate III; Yo. 0055. a in Plate I; Yo. 0057 in Plate II)

Terra-cotta heads.

It is probable that among the numerous heads, male and female, worked in the round, which the present collection includes, a considerable portion at least had served the purposes of vase decoration, even though their exact application remains doubtful. They derive interest from the ethnic type clearly marked in them. This is particularly striking in the case of the male heads (Yo. 009. a–c; Plates I, III). With their well-shaped 'Aryan' features, including high-bridged noses and prominently set eyes, they seem to bear out what anthropological and other evidence leads us to assume about the racial character of the old Khotan population and its nexus with the *Homo Alpinus* type of the Pāmīr region. That the type intended must be essentially local becomes clear

at once on comparing it with the conventionalized heads, which the hieratic sculpture of Khotan has borrowed from Graeco-Buddhist art.

In the case of the female heads, too, it is easy to distinguish the local type, represented by the extensive series Yo. 009. d–f, h, 0041. a–e (see Plate I), from that of the appliqué heads, probably belonging to Gandharvīs and similar divine figures (Yo. 0026, 0067, 00182; see Plate III), which is obviously derived from Gandhāra. A very curious feature is the great variety and elaborate nature of the coiffures represented. Interesting additional details about fashion in dress are furnished by the few complete figurines of women (Yo. 1, 2, Plate II; Yo. 0073, Plate I). That such figurines could serve also as vessels, perhaps for unguents, is shown by Yo. 1, 0056.

Monkey figurines.

But human figures are rare as compared with the great mass of terra-cotta figurines representing animals. Among these again monkeys largely predominate. The very clever way in which these figures are modelled, however miniature in size, and the artistic skill with which human poses and expressions are given to them, have often been noted in connexion with former collections. The treatment of the heads varies from a careful naturalism to a rough but effective grotesque, as the few selections from the series Yo. 003–7, 0035, 0051, 0052, etc., represented in Plate III (also Yo. 009. g, 0043. e, in Plate I) will show. The humour of the Khotanese public was manifestly pleased to see its prominent failings caricatured under the guise of these monkey figurines; for this clearly is the explanation of the manifold representations of monkeys playing on musical instruments and for the still more numerous ithyphallic figures and pairs in amorous embrace (Yo. 003. o, 0031. a, 0034. d, 002. a–n, 0048. a–f, 0050, etc., Plate III).[4]

Musical instruments of figurines.

Among the musical instruments the guitar is most frequent, being evidently a favourite like its modern descendant, the *rabāb* (Yo. 01. b, 003. l, m, 0032. a, d, 0047. a, b, 0062; Plate III, etc.). Besides it we find the syrinx (Yo. 003. c, d, 0032. b) and drum (Yo. 003. e, 0032. c) and also the harp, this last in the hands of a human appliqué figure (Yo. 0066; Plate III). Flute and cymbal appear in addition on the terra-cotta relief Yo. 02 (Plate I). Human fondness for children is revealed in the frequent figurines which show monkey babies in cradles or held in the arms (Yo. 0010. a, 0028. c, 0038. a–d, 0063; Plates I, III). A particularly curious group is Yo. 0070 (Plate I) where a female monkey with baby and bird in her arms is carried Anchises fashion on the shoulders by her monkey mate. Here we may mention also the interesting proof which monkey figurines furnish for the early use at Khotan of inflated skins as means for crossing rivers.[5] Yo. 0031. d, e (Plate III) show monkeys in the act of floating on skins, while in Yo. 003. q, a monkey appears kneeling with a skin on his back ready for use. Such skins are represented also separately in miniature terra-cotta (Yo. 0053; Khot. 0014).

Figurines of animals.

Among other animal figures the camel is most frequent (e. g. Yo. 008. c, 011. c–e, 0029; Plates II, III). In Yo. 0049. a, b (Plate III) it appears loaded, in the latter specimen with what look like skins full of water. Horse and rider are seen in Yo. 0015. b, e, 0030. a, 0045. a (Plate I). In addition we have the peacock (Yo. 0030. c, 0061; Plate II), yak (Yo. 0071) and boar, the latter shown with naturalistic skill in Yo. 0064 (Plate III).

Small carvings in stone.

Whereas in the case of pottery and terra-cotta objects local origin may safely be assumed, no such assurance can be felt as regards other small antiques in stone, metal, and glass which are

[4] As regards the love of music and dancing in ancient and modern Khotan, cf. *Ancient Khotan*, i. pp. 139, 141; for the proverbial reputation enjoyed by Khotan for licentiousness in old and modern times, see *ibid.*, pp. 139, 142.

[5] I have not come across the indigenous use of skins (i. e. the Indian 'Mussuck') in modern Chinese Turkestān. But it is well known on the rivers of Western Turkestān and since ancient times in Īrān, Mesopotamia, etc.; cf. Dr. R. Trebitsch's monograph on the history and geographical distribution of the use of inflated skins in *Archiv für Anthropologie*, 1912, xi. pp. 175 sqq.

comprised in the acquisitions from Yōtkan and Khotan and partly reproduced in Plates V, VI, VII. But this does not detract from their interest, since, if not actually produced in the Khotan region, they are tangible proofs of that importation of models through which the artistic influence from India and the West must be supposed to have directly asserted itself. Thus it may be considered certain that the remarkably well-carved small steatite sculpture Yo. 00121 (Plate VI), showing the crown of a miniature Stūpa, with its succession of umbrellas resting on figures of Buddhas and grotesque animals, came to ancient Khotan from Gandhāra. The same conclusion is probable of the small steatite relievos Yo. 00138 and Khot. 04. e, and of the well-modelled nude figure, Khot. 02. o, in a slatey kind of stone (Plate VI). In the case of other steatite carvings (Yo. 05. b–d, 0082, 00120, 00134, 00165; Khot. 006; Plate VI) the indication of style is uncertain, while for Yo. 00166 the monkey figure points distinctly to Khotan. Local origin is made probable both by the jade material and the carving for the small monkey figure, Yo. 06. a; the bird, Khot. 04. f (Plate VI); and the engraved slab, Yo. 0091. a (Plate VII). Of other jade objects a ring, Khot. 0061, a miniature vase, Yo. 06. f (Plate IV), and a fragmentary buckle, Yo. 00152, may be mentioned.

Objects in metal. Of miscellaneous metal objects, mostly in bronze, of which Plates VI and VII show a number (Khot. 02. c, h, 005, 008, 009, 0020, 0025, 0046, 0050; Yo. 05. a, 00105, 00118, 00139), it is still more difficult to determine the place of production. But in none of them does the style of modelling or ornamentation differ noticeably from that otherwise known to us in the art work of ancient Khotan. Of distinct interest are the leg of a small stand in bronze, Yo. 00173; the octagonal ferruled ornament resembling a mace-head, Yo. 0081, in the same metal; and the curious object resembling a Janus-head, Yo. 00174, the purpose of which remains doubtful—all shown in Plate VII. Of the arrowheads, triangular in section, Khot. 003, 0017 (Plate VI), 0047, 0048, it is noteworthy that their shape closely approaches the type which specimens like T. XII. 0020 (Plate LIII), from the ancient Limes of Tun-huang, prove to have been in use during Han times. Instructive as showing the methods by which some of these small bronze objects were cast, are the clay moulds which were brought to me as having been found at Tam-ōghil (Tam. 001–004). As detailed in my former Report, gold-washing operations are carried on at this place, near the north-east edge of the Khotan oasis, among 'culture-strata' closely resembling those of Yōtkan.[6]

Jewellery; imported glass ware. The tiny pieces of gold jewellery, Yo. 00127 (Plate VI), acquired at Yōtkan and showing in part very fine work, illustrate a class of 'finds' which, unfortunately for archaeological interests, is but very rarely preserved from the melting-pot. Among the numerous beads in glass and stone, those inlaid with designs in white (Yo. 00114, 00125; Khot. 02. q, r, 0069; see Plate IV) may be singled out for brief mention, as their technique is still in need of expert determination. Of distinct interest is also the bead of *millefiori* glass mosaic, Khot. 0072 (Plate IV), as it shows a regular Western type which was common in the Roman Empire. Imports of Western glass ware into China are attested down to relatively late times, and while it is still uncertain whether glass was manufactured in Central Asia also, such indubitable proof of imports direct from the Mediterranean region has its value.

Seals and intaglios. Of the seals acquired from Yōtkan or Khotan town most will be found reproduced in the lower half of Plate V. Whether in metal or stone, they all show so close an approach in type to the corresponding finds and acquisitions made during my previous journey at sites of the Khotan region (see Plates XLIX, L of *Ancient Khotan*) that their local origin can scarcely be doubted. It is very different with the intaglios, of which fifty are reproduced in the upper half of Plate V, and for the determination of which Professor Percy Gardner has been kind enough to give help. Here we meet with pieces which are undoubtedly late classical work and others which, though Oriental,

[6] See *Ancient Khotan*, i. p. 472.

must have been produced much further west than Khotan. To the former class belong the well-modelled female bust, Khot. 0080; the beardless male head of the type of Alexander, Badr. 002; the fine helmeted male head, Khot. 0091, as well as the Persian-looking head, Khot. 0077; the bust of a Roman warrior, Yo. 0096. a; and the large beardless male head, Yo. 05. e, round which Brāhmī characters have been engraved by another hand. Barbarous reflections of some late classical originals may be recognized in such pieces as Khot. 04. h, j, 004. b, 0075, 0076, 0079, 0092; Badr. 001; Yo. 012. b, 0099. To production within or near the Sassanian Empire point the types shown by Khot. 004. a, with its Pahlavī inscription; Khot. 0090, with a few characters in a script vaguely suggesting Sogdian; and Yo. 00206. The head on the last-named intaglio shows close resemblance to I. 001, reproduced in Plate XLIX of *Ancient Khotan*, which still seems linked by its legend with the Scytho-Sassanian coins of the Indo-Īrānian borderlands. The large stone, Yo. 07, with its goddess bestriding a leonine dragon, is suggestive of Indian influence. We must assume either Indian or Khotanese origin for Khot. 0088, with a monkey playing on a pipe and a small figure dancing before him, on account of the short Brāhmī legend undoubtedly engraved by the same hand. Seeing that the naturalistic treatment of the monkey agrees closely with that shown by the terra-cotta figurines, local production appears to me distinctly probable in this case. There still remains a numerously represented class of intaglios to be mentioned, filling the first three rows in Pl. v and mostly of small size. Almost all show figures of animals, often cut with considerable skill, and recalling, in bold but effective design, those appearing among the Yōtkan pottery and figurines. Considering that the great majority of these intaglios are cut in stones like chalcedony and cornelian, of which the Kun-lun Range east of Khotan could always furnish a ready supply,[7] and further that this class was also largely represented in my first collection from Khotan, I am now inclined to look upon them as likely to be from the hands of old Khotan engravers.

Coins collected from Yōtkan.

If I have left it to the last to mention the relatively large collection of coins which I acquired either at Yōtkan or as coming from that site, it is mainly because they will be separately dealt with in Appendix B by Mr. J. Allan; also because the value of the chronological evidence furnished by coins must obviously be much smaller in the case of acquisitions by purchase than when coin finds can be authenticated at the site itself. At the time when these acquisitions were made, my leisure did not suffice for more than a most cursory inspection. The brief remarks to be offered here are based entirely on the preliminary analysis of these coins with which Mr. J. Allan has kindly furnished me, and must be confined to their chronological bearing in general. In order to obtain a safer basis for observations on this point I have thought it best here to leave aside the coins which I purchased at Khotan, but about the origin of which no information was available.

The chronological range of the coins acquired from Yōtkan, all copper, with the exception of a single piece in lead, agrees strikingly with that indicated by the collection which I obtained in 1900–1 and discussed in *Ancient Khotan* at some length.[8] It extends from the Sino-Kharoṣṭhī currency of Khotan, issued probably during the first few centuries of our era, down to pieces of the Sung dynasty, the latest of these bearing the 'Nien-hao' of A.D. 1078–86. In addition, the Indo-Scythian coinage is represented by two pieces of Kaniṣka (see Plate CXL, Nos. 9, 10).

Chinese coin types represented.

While the total number of identified coins amounts to 337, the number of main issues represented is relatively small. Apart from the few non-Chinese pieces just mentioned, there are 47 coins of the local Sino-Kharoṣṭhī type, bearing Chinese legends on the obverse and Indian Prākrit ones on the reverse (Plate CXL, Nos. 4, 6, 7). The early Chinese coinage, in the shape of *wu-shu*

[7] Already Marco Polo when speaking of 'Pein', roughly corresponding to the Keriya tract, and Charchan mentions 'rivers which bring down Jasper and Chalcedony'; Yule, *Marco Polo*, i. pp. 191, 194.

[8] See *Ancient Khotan*, i. pp. 203 sqq.

pieces such as were issued both under the Former and Later Han dynasties, takes up a large portion of the total with 113 specimens. It must, however, be noted that not less than 48 of these belong to a single hoard, the accidental discovery of which was bound to upset the usual proportion. To the Sung and Sui dynasties of the fifth and sixth centuries A. D. Mr. Allan ascribes three *wu-shu* pieces of a later type.

Of the 'cash' bearing the legend *K'ai-yüan t'ung pao* (Plate CXL, No. 39), which was first introduced by Kao tsu (A. D. 618–26) but was minted through the whole T'ang period, there are only four specimens. On the other hand, the different issues showing the name of the Ch'ien-yüan period (A. D. 758–9) are represented by not less than 134 pieces. The last T'ang *nien-hao* which appears among these coins is that of Ta-li (A. D. 766–79), being found on twenty-eight pieces (Plate CXL, No. 47). One coin each of the Chih-tao (A. D. 995–8), T'ien-hsi (A. D. 1017–22), and Yüan-fêng (A. D. 1078–86) periods attest occupation of the Yōtkan Site during Sung times and continued relations with China also after the Muhammadan conquest. Of the latter there is evidence in three coins of Muhammad Arslān, belonging to the eleventh century.[9]

Coins from desert sites near Khotan.

It is of some interest to compare the ratio in which the various issues are represented in this collection from Yōtkan with that shown by the aggregate of the coin sets which were brought to me at Khotan avowedly from old sites beyond the north-eastern edge of the oasis, such as the 'Tatis' of Ak-sipil and Hanguya. Here a total of 124 identified pieces comprises 1 coin of Wang Mang (A. D. 14–19; Plate CXL, No. 14), 9 Sino-Kharoṣṭhī coins, 8 *wu-shu* of Han times, 26 clipped *wu-shu* probably of the fifth century A. D., 17 T'ang coins (mainly Ch'ien-yüan), 17 Sung coins, and 46 coins of various early Muhammadan rulers. This analysis demonstrates a markedly greater proportion of late coins for these 'Tati' sites. This is fully in keeping with what other antiquarian evidence indicates as to their time of abandonment. This fact, coupled with the close agreement shown between my present and former collections from Yōtkan, must add weight to the numismatic evidence which even such chance acquisitions afford for the history of the ancient capital.

Section III.—LIST OF ANTIQUES ACQUIRED FROM YŌTKAN AND IN KHOTAN

ANTIQUES FROM YŌTKAN PURCHASED AT OR FROM SITE

Yo. 1. Terra-cotta moulded figurine, upper part of woman; hair cut straight across forehead, falls in two masses in front of shoulders and over shoulders behind; small pigtail indicated by incising. Round neck is orn. collar, and ribbon with jewel; breasts bare; below, traces of appliqué garment. All below waist missing. Hole through mouth prob. shows that fig. was used as vessel, e. g. for unguents. Cf. Yo. 0061. Curiously rude and primitive-looking work. H. 4¾". Pl. II.

Yo. 2. Terra-cotta moulded fig. of woman, squatting and holding child. Hair, gathered by bead circlet into big topknot, falls in pigtail which is looped up again with two bows to top of head. Short locks hang over cheeks. Eyes very prominent, pupils marked by holes; other holes for nostrils and corners of mouth. Fig. wears fur-trimmed jacket with full pointed sleeves, and closely pleated underskirt. Infant wears cap and swaddling clothes; features punctured. Rough but vigorous work. H. 6". Pl. II.

Yo. 01. a. Pottery amphora. Broadly splayed base-ring ⅞" high. Walls swell out sharply, making return towards neck at height of 5½". Round angle of shoulder band of appliqué, oval jewels with beaded rims, between incised lines. From band of incised circles round base of neck incised lines with punctured dot borders descend to pairs of leaves, appliqué, set above incised band; fields occupied by leaves divided by double incised lines. At either side, stump of handle below which appliqué mask; type of Yo. 001. d, q. v. Remains of appliqué orn. on neck. Stumps of handles and fracture of neck have been cut down smooth so that vessel might continue in use. Wheel-made; fine red clay. H. 8¼". Pl. IV.

Yo. 01. b. Terra-cotta monkey, crude naturalistic type, playing guitar. All below hips missing. Cf. *Anc. Khotan*, Pl. XLVI, Y. 009. i. H. 1 3/16".

Yo. 01. c. Terra-cotta fr. Five-leaved appliqué palmette. Length 2¼"; gr. width *c.* 2". Pl. III.

[9] See Hoernle, *Report on C.-A. Antiquities*, i. p. 31.

Yo. 02. Terra-cotta slab of uncertain use, representing façade of building. At base of fr. balustrade or rail on which stand short Indo-Corinthian columns (one remaining) with bracket capital, lotus-buds on S-shaped stalks, supporting arches. In spandrels, circular rosettes. Above is band of half-round moulding, twisted strands alternately plain and beaded. Above this rise stepped battlements (cf. Foucher, *L'Art du Gandhâra*, i. Fig. 99), between which are miniature figs., elephant, man, and fr. of another. Under arcade half-length figs. of musicians. On R., flute-player; wears turban and plain-sleeved coat. On L., cymbal-player; elaborate head-dress with peak in front and streamers over ears ending in jewels; wears loose sleeved jacket. Cf. for general scheme, Foucher, *op. cit.*, Figs. 165, 297–300.

On rev. of slab, behind battlements, row of bead and plain circle rosettes, below which ledge divided by vertical half-round notches into row of brackets. Rest below, plain. Very fine work. $4\frac{5}{8}'' \times 5''$. Pl. I.

Yo. 04. a. Terra-cotta fig. of horse with rider seated on kind of saddle-cloth. Both fore- and hind-legs of horse solid. Saddle and harness incised. Cf. Yo. 0030. a. H. $1\frac{7}{8}''$; length $2\frac{3}{4}''$.

Yo. 05. a. Bronze cast of seated Buddha, with pointed halo. Corroded. Remains of stud or shank behind. Gr. m., $1'' \times \frac{3}{4}''$. Pl. VI.

Yo. 05. b. White soapstone fig., very rudely cut, seated cross-legged, with L. elbow in R. hand, and L. hand supporting head. Face worn flat; back not carved out. *C.* $\frac{3}{4}'' \times \frac{5}{8}''$.

Yo. 05. c. Bar of white soapstone, small, round, dumb-bell shaped with groove round middle. Length $\frac{23}{32}''$; gr. diam. $\frac{3}{16}''$.

Yo. 05. d. Soapstone relief, fr. of peacock (front view). Outspread tail forms large halo. No attempt to show feathers; no eyes. Feet broken off and R. side of tail. H. *c.* $1\frac{5}{8}''$; gr. width (broken) $\frac{5}{8}''$. Pl. VI.

Yo. 05. e. Crystal intaglio, hemispherical. Beardless male bust to L. Hair, rendered by two rows of crescent curves, brushed from centre of head and forming heavy bandeau over forehead and behind ears, tied with fillet. Bust draped in plain tunic laced in front; bead ear-ring. Late classical type. On either side of head three characters in Brāhmī, cut by a different hand, read by Dr. Barnett *sayari—kunasa*. Cutting of head fairly good, of inscription very rough, mostly drill work. Set in modern silver ring. Diam. $\frac{1}{2}''$. Pl. V.

Yo. 06. a. Jade fig. of monkey, kneeling and bending forwards from waist. Arms held out close together in front, as if praying; but hands gone. Tail broken. Length (head to foot) *c.* $\frac{7}{8}''$. Pl. VI.

Yo. 06. b. Terra-cotta monkey, 'owl' type, squatting on heels. L. hand on mouth; R. lost. Rudely modelled. Cf. Yo. 0031. b, etc. H. $\frac{15}{16}''$.

Yo. 06. c. Terra-cotta monkey, naturalistic type, seated with knees drawn up. L. leg gone and both arms. Cf. Yo. 0032. d and 00178; rude work. H. $\frac{9}{16}''$.

Yo. 06. d. Hexagonal crystal. Length $\frac{7}{16}''$; diam. $\frac{1}{4}''$.

Yo. 06. e. As Yo. 06. d, but smaller. Length $\frac{11}{32}''$, diam. *c.* $\frac{3}{32}''$.

Yo. 06. f. Dark green jade model vase. Round body and foot; long neck. H. $\frac{9}{16}''$. Pl. IV.

Yo. 06. h. Clay spindle-whorl, convex face and back. Hole through middle; incised circle on face, $\frac{1}{8}''$ from edge, with two diameters at right angles to each other, ending in holes sunk in circumference joined by curved lines, concave to segments of the circle. Spaces thus formed filled by rows of incised dashes. Diam. *c.* $\frac{15}{16}''$.

Yo. 06. k. White steatite (?) bead; flattened spheroid. Chipped. Diam. *c.* $\frac{1}{2}''$.

Yo. 06. l. Cylindrical pendant of white glass, seven-ribbed, semi-transparent. One end rounded off; about $\frac{3}{16}''$ from other, a deep groove all round. Through head left beyond this, a hole for suspension. Cf. N. XXIX. 005. Length $1\frac{1}{8}''$, gr. diam. $\frac{3}{8}''$. Pl. IV.

Yo. 07. Elliptical garnet intaglio, plano-convex. A goddess (Durgā?) astride a dragon advancing L. Goddess has hair falling over shoulders, quilted skirt, overskirt, heavy girdle, and carries in her L. hand a double pennant. Dragon is leonine with open jaws, forking floriate tongue and tail, heavy mane and fringed fore-legs. Fine work, polished in cutting. $\frac{3}{4}'' \times \frac{9}{16}''$. Pl. V.

Yo. 010. c. Elliptical cornelian intaglio, flat; half only. Near middle of broken edge, a deeply incised circle. Down side of circle, near break, runs a straight groove, which continues to edge of seal on one side, but dies away on other. $\frac{1}{2}'' \times \frac{3}{8}''$ (broken).

Yo. 010. d. Rhombus-shaped garnet intaglio, flat. A bird to L., standing with wings slightly raised; poor work. $\frac{1}{4}'' \times \frac{3}{16}''$. Pl. V.

Yo. 010. e. Bronze signet-ring bezel and part of hoop. Seal represents warrior in mailed trousers (?), L. knee bent. Head turned L. looking down, with helmet. L. arm raised from elbow holding something. Stole hangs, in long folds, from R. shoulder. Seal $\frac{5}{8}'' \times \frac{7}{16}''$. Pl. V.

Yo. 011. a. Terra-cotta head of monkey in round; replica of Yo. 007. f, save for some incised details, and better condition. H. $1\frac{1}{4}''$.

Yo. 011. b. Female head, see Yo. 009. h. Eyebrows incised. eyelids in relief. Plain band round topknot. H. $2\frac{3}{8}''$.

Yo. 011. c. Terra-cotta camel. Hair represented by incised lines and short dashes. Traces of rider between humps. Legs lost. H. $1\frac{15}{16}''$.

Yo. 011. d. Terra-cotta camel. Very rough; legs solid; hair indicated by incised lines for mane, and small triangular points on neck and shoulders. Cf. *Anc. Khotan*, Pl. XLVII, Y. 009. 1. Hind-legs and humps missing. H. 3″.

Yo. 011. e. Terra-cotta Bactrian camel, roughly modelled (cf. *Anc. Khotan*, Pl. XLVII, Y. 0012. t). Sides of face drilled abnormally to represent corners of mouth. Flanks between two humps rough, indicating loss of a rider. Hair scored. H. $2\frac{3}{8}$″.

Yo. 012. a. Elliptical cornelian intaglio, flat. Boar, with long snout, walking L. Poor work, almost entirely drilled. $\frac{1}{2}$″ × $\frac{13}{32}$″. Pl. V.

Yo. 012. b. Circular garnet intaglio, convex, L. half of. Winged Victory wearing wreath and long drapery advances R., flying just above ground with hands outstretched towards a trophy (?) of which helmet, cuirass, and greaves can be distinguished. Cf. Roman coins of the fourth century. Poor work, but polished in cutting. Diam. $\frac{9}{16}$″. Pl. V.

Yo. 012. c. Elliptical garnet intaglio, convex, L. side of. Forepart of animal to L., feeding in field; grass indicated. Very rough work. $\frac{5}{16}$″. Pl. V.

Yo. 012. d. Elliptical intaglio of banded chalcedony, flat. Camel, with single, apparently hairy, hump, kneeling to L. with head turned R. over back. Summary work. $\frac{5}{16}$″ × $\frac{1}{4}$″. Pl. V.

Yo. 001. a–v. Terra-cotta appliqué masks from vases, series of. Faces grotesquely human. Several slightly different moulds were used, and parts were moulded separately so that great variety results. Much hand-tooling on the finished cast made further differences, and there are few duplicates. All have hair parted in middle and rising over forehead in straight line to ears; strands represented by grooved lines running back over ears or to top of head. Forehead plain, or marked by central dot, by straight vertical line, or by straight line and V. Eyes prominent, compass-drawn circles set either in long socket or flush with face. Nose prominent with very broad nostrils, sometimes accentuated by drilled holes or compass-drawn circles. Mouth very large with thick lips; lines from nose to corners of mouth generally deeply marked; corners of mouth often accentuated by a depression, or by a second dimple. Ears large, rather pointed, with big lobes or ear-rings.

See Yo. 0024, 0044. Cf. Yo. 0011, 0012. a, *Anc. Khotan*, Pl. XLVII, Kh. 003. f. Most human type Yo. 001. o, 0024. n, q. v; type degenerates until through Yo. 001. h, it arrives with 001. u. 1 almost at the lion (Yo. 0012. i) from which it is distinguished mainly by absence of beard and mane.

Yo. 001. a. Resembles Yo. 001. r, but lower features much worn. H. $1\frac{3}{8}$″. *Yo. 001. b.* Replica of Yo. 001. r; worn example. H. $1\frac{1}{4}$″. *Yo. 001. c.* Very cleanly modelled. Vertical groove and curved V-mark on forehead; eyes set in long sockets; nostrils marked by three incised circles. Cf. Yo. 0024. f. H. $1\frac{1}{4}$″. *Yo. 001. d.* Same type as Yo. 001. h, i. H. $1\frac{1}{4}$″. *Yo. 001. e.* Vertical groove in forehead. Small eyes set in long sockets; features well defined. Resembles Yo. 001. d in general character. H. $1\frac{1}{8}$″. *Yo. 001. f.* Small; finely finished. Hair on R. side worked into fine locks. See Yo. 0024. h, 0044. e. Mouth turned up. H. $1\frac{1}{8}$″. *Yo. 001. g.* Vertical groove in forehead; top line of forehead almost flat; lines of hair almost upright. Mouth short and straight. Eyes flat raised discs without central dot. Cf. Yo. 0024. c. H. $1\frac{3}{4}$″. *Yo. 001. h.* Replica of Yo. 001. i type. H. $1\frac{7}{16}$″. Pl. III. *Yo. 001. i.* Forehead pointed, with slight vertical groove. Eyes small, set in slight hollow. Nostrils marked by incised circles. Mouth long and straight with broad lips. Receding chin. See Yo. 001. d, e, h, u, 0024. b, e, 0044. d. H. $1\frac{3}{16}$″. *Yo. 001. k.* Replica of Yo. 001. c much worn. H. $1\frac{1}{16}$″. *Yo. 001. l.* Partly broken. Approaching lion type. Nose shorter; mouth curved with deeply drilled corners; ears larger than in typical examples as Yo. 001. e. H. $1\frac{1}{8}$″. *Yo. 001. m.* Three dimples at corners of mouth. Much damaged. H. $1\frac{3}{16}$″. *Yo. 001. n.* Burnt since firing and indistinct. H. $1\frac{3}{16}$″. *Yo. 001. o.* Differs from others in depth of lines and roundness and height of modelling. Excellent work, not from same series of moulds. H. $1\frac{1}{8}$″. Pl. III. *Yo. 001. p.* Mouth deeply outlined; curved lines from eyes to mouth; hole in forehead. Cf. Yo. 001. s. H. $1\frac{1}{8}$″. *Yo. 001. q.* Small. Rough work. H. $1\frac{1}{12}$″. *Yo. 001. r.* Well-worked lines from nostrils round corners of mouth; dimples beyond these. Cf. Yo. 0044. a. H. $1\frac{5}{12}$″. *Yo. 001. s.* Replica of Yo. 001. r. H. $1\frac{1}{4}$″. *Yo. 001. t.* Lines of hair slightly waved. Eyes and mouth very large. Surface rubbed. H. $1\frac{1}{3}$″. *Yo. 001. u.* Replica (except for hair) of Yo. 001. e. H. $1\frac{3}{16}$″. *Yo. 001. u. 1.* Large. Nostrils, corners of mouth, ears, and forehead punctured. Eyes and lobes of ears have compass-incised circles. Outline of hair over forehead faint. Approaching lion type. H. $1\frac{9}{16}$″. Pl. III. *Yo. 001. v.* Small; features set very close together. Poor work. H. $\frac{15}{16}$″.

Yo. 002. a–n. Terra-cotta pairs of miniature figs., rudely modelled, nude in symplegma. Faces monkey-like, with prominent muzzle, round eyes, and depression up forehead and crown. Yo. 002. k has surface punctured for hair, and a tail. This larger, Yo. 002. f smaller than rest which average $1\frac{1}{4}$″ H. Feet not distinguished. Female sometimes shown by long pigtail (Yo. 002. i). Cf. Yo. 0048 a–f (*a* and *b* unusually well done, moulded, not modelled). Cf. *Anc. Khotan*, Pl. XLVII, Y. 0012. a. ii, 0012. z, 009. r.

Yo. 002. a. Legs broken. H. $1\frac{1}{4}$″. *Yo. 002. b.* Female wears pigtail. Head and L. leg. of female; L. leg below knee and R. arm of male lost. H. $1\frac{3}{8}$″. *Yo. 002. c.* Single fig.; head and arm lost. Hands of second show behind. H. $1\frac{1}{16}$″. *Yo. 002. d.* Head of male lost; sex of other fig. indicated by long pigtail. H. $1\frac{3}{8}$″. *Yo. 002. e.*

Lower limbs lost. Much worn. H. 1". *Yo. 002. f.* Very small. Head of one fig. and lower limbs of both lost. H. 9/16". *Yo. 002. g.* Single fig.; arms and legs lost. H. 1". *Yo. 002. h.* H. 1¼". Pl. III. *Yo. 002. i.* One fig. has long pigtail. Legs broken. H. 1¼". *Yo. 002. k.* Upper part of one monkey; arms missing. Tail. Hair incised. H. 1 5/16". *Yo. 002. l–m* (joined). One head and all below thighs missing. H. 1½". *Yo. 002. n.* Heads and all below waists missing. H. 15/32".

Yo. 003. a, b, f, g, g. 1, h, i, i. 1, k. Terra-cotta grotesque figs. of monkeys squatting upright on haunches. Each wears loin-cloth. One hand raised to head, other laid on breast. Features generally owl-like, sometimes naturalistic. Work rude. Cf. Yo. 0031. b, c; 0037. b. See *Anc. Khotan*, Pl. XLVII, Y. 009. o; Kh. 003. n. Prob. of same type are Yo. 0034. a–c; 0051. a–c.

Yo. 003. a. Owl type. R. arm placed on breast, L. raised to side of head. R. leg missing. Rude work. H. 1⅛". *Yo. 003 b.* Owl type, L. arm lost, as also legs from thighs. Rough. H. 13/16". *Yo. 003. f.* Owl type. Arms and legs lost. Very rough. H. ⅞". *Yo. 003. g.* Owl type. Legs lost. R. hand laid upon breast, L. raised to back of head which is turned R. H. ⅞". *Yo. 003. g. 1.* R. hand upon breast; L. arm outstretched. L. forearm and all below waist missing. H. ¾". *Yo. 003. h.* Larger fig. Only legs from thighs down preserved. H. ⅝". *Yo. 003. i.* Rudely naturalistic; R. arm lost, L. raised to mouth. H. 1⅝". *Yo. 003, i. 1.* L. hand placed on stomach, R. arm broken. Head, R. arm, and R. leg from thigh to below knee missing. H. 1 1/16". *Yo. 003. k.* Roughly naturalistic type. Dressed in well-worked cap, collar or cape, and coat with scalloped end at back; garments indicated clearly by incised lines. Both arms lost. H. 1⅞".

Yo. 003. c. Terra-cotta monkey (owl type), squatting. Holds syrinx in both hands to mouth. Cf. *Anc. Khotan*, Pl. XLVI, B. 002. H. 15/16".

Yo. 003. d. Terra-cotta relief of grotesque human fig. playing syrinx. Wears bracelet on either wrist, and side-curls. Broken at waist. H. 1¼".

Yo. 003. e. Terra-cotta monkey, owl type; squatting. Wears loin-cloth. Under L. arm holds drum (?) which he strikes with R. hand. Cf. *Anc. Khotan*, Pl. XLVI, Y. 0012. b. H. 1⅛".

Yo. 003. l. Terra-cotta monkey, squatting and playing guitar. Head inclined to L. Wears loin-cloth. Cf. *Anc. Khotan*, Pl. XLVI, Y. 009. i. H. 1".

Yo. 003. m. Terra-cotta monkey, naturalistic type, squatting and playing guitar. Handle of guitar and L. arm lost. Fine miniature work. H. ⅝".

Yo. 003. n. Terra-cotta grotesque monkey bearing before him in both hands flower-like object or leaf. Miniature scale. All below waist lost. H. 7/16".

Yo. 003. o. Terra-cotta grotesque monkey, miniature; knees drawn up to chest; ithyphallic. R. arm is raised to side of head; L. arm and both legs lost. Pierced vertically through body for suspension. H. 7/16".

Yo. 003. o. 1. Terra-cotta miniature monkey, naturalistic type, seated astride phallus (broken). Cf. Yo. 0050 and *Anc. Khotan*, Pl. XLVII, Y. 009. q. H. ⅝".

Yo. 003. p. Terra-cotta monkey, squatting on heels, hands placed on knees in attitude of meditation. Miniature scale; naturalistic. H. 11/16".

Yo. 003. q. Terra-cotta monkey, squatting on heels, hands on knees; carries water-skin on back. Miniature scale; good naturalistic work. H. ⅝". Pl. III.

Yo. 004. a. Terra-cotta fr. from R. half of large grotesque fig. of monkey seated, with knees drawn up against chest, on circular lotus base. Fr. split away down line of junction between two moulded sides. Most of base, feet, shoulders, and head lost. Fur rendered by bands of incisions; on body these between incised lines. H. 3¾".

Yo. 004. b. Terra-cotta monkey, seated on short upright circular object; legs below thighs, and arms missing. Rough naturalistic work. H. 1¾".

Yo. 005. a. Terra-cotta grotesque fig., upper part of; R. arm extended and bent at elbow; L. arm broken away; all beneath breast lost. Incised hair on head, back, and arms, as if monkey. Face human with pointed beard (incised) and moustache (in relief). H. 1 1/16".

Yo. 005. b. Terra-cotta grotesque monkey, upper part of. Both arms, body from below chest, and muzzle lost. H. 1".

Yo. 006. a. Terra-cotta monkey, bust of. R. arm, L. forearm, and all below waist, missing. Rough naturalistic work. H. 15/16".

Yo. 006. a. 1. Terra-cotta monkey head in round; naturalistic type; pigtail behind head. H. ½".

Yo. 006. b. Terra-cotta monkey head. From top of head falls pigtail. Ears are large (L. ear lost); above and slightly behind each is round projecting boss. H. 1⅛".

Yo. 007. a. Terra-cotta monkey head in round; eyes formed by stamped circles; hair indicated by incised lines. Very rude work. H. ⅞".

Yo. 007. b. Terra-cotta monkey head in round; eyes formed by dot and circle; hair indicated on brow and cheeks. Round neck is collar orn. with single line of punch-marks. Face well modelled to express apish grin. H. ⅞". Pl. III.

Yo. 007. c. Terra-cotta monkey head in round; long hair on top of head rendered by incised strokes, that of back and sides by short dashes; face formed by scooping two large hollows side by side and stamping dot-and-circle eye in each. Rude work. H. 1½".

Yo. 007. d. Terra-cotta monkey head, grotesque, entirely without modelling. Hair indicated by incisions on brow and lip. Eyes formed by small round stamp. Moustache incised. H. $\frac{13}{16}$″.

Yo. 007. e. Terra-cotta mask of monkey; from front mould. Features indicated by stamping and incision. Rude work. H. $\frac{7}{8}$″.

Yo. 007. f. Terra-cotta monkey head in round. Though worn, head is carefully executed, eyes set in sockets, chin and cheeks modelled. Hair on face rendered by punctured dots, longer hair on back of head by stamps of semi-circular punch. Closely resembles Y. 011. a, q. v. H. $1\frac{3}{16}$″.

Yo. 008. a. Terra-cotta fig. of camel; hind-legs and hump lost; shows traces of rider or load behind fore-hump. Very crudely modelled. H. $1\frac{7}{8}$″; length $2\frac{3}{8}$″. Pl. II.

Yo. 008. b. Terra-cotta Bactrian camel. Cf. *Anc. Khotan*, Pl. XLVII, Y. 0012. 1. Hair scored, mane below neck incised. Eyes compass-incised; fore-legs missing. Poor work. H. $1\frac{3}{8}$″.

Yo. 008. c. Terra-cotta camel of normal type but slightly larger size; traces of burdens attached to either flank between humps. Cf. *Anc. Khotan*, Pl. XLVII, B. 001. j. H. $3\frac{1}{8}$″. Pl. II.

Yo. 008. d. Terra-cotta miniature camel of normal type. Hair scored. Rough work. H. $1\frac{1}{8}$″.

Yo. 008. e. Terra-cotta head of camel, normal type. Length $1\frac{5}{16}$″.

Yo. 009. a. Terra-cotta head from male fig. High forehead. Hair straight across middle, then looped down heavily to ears. Dotted circle (*Tilaka*) on forehead. Eyebrows scored. Eyes almond-shaped, in relief. Thin nose and small mouth; drooping moustache. Back of head missing. Poor work. H. $1\frac{1}{4}$″.

Yo. 009. b. Terra-cotta fr. of male face. All above L. lower eyelid and R. of nose lost; nose round-ended and not very prominent, large rope-like moustache. Three lines enclosing two rows of dots follow contour of lower jaw representing gorget (?). Lower eyelid and cheek well modelled. Original length of face *c.* 4″. Pl. I.

Yo. 009. c. Terra-cotta male face from statuette. High forehead. Hair makes horizontal line across and is then looped down to top of ears. Eyes long and narrow, slightly slanting, deeply incised on plane of face. Eyebrows incised and punctured. Small nose. Short mouth with corner punctured. Long moustache and short curly beard. Rings in ears. Good effective work. Back of head missing. H. $1\frac{5}{16}$″. Pl. III.

Yo. 009. c. 1. Terra-cotta male head (front cast). Straight moustache, small beard on under-lip and slightly curly beard on edges of jaw. Forehead bald, thick masses of hair on either side of head. Eyes slanting, in relief. Much damaged. H. $1\frac{7}{16}$″.

Yo. 009. c. 2. Terra-cotta male head. Hair cut in straight fringe along brow; eyes long and narrow; incised. Small moustache. Back of head missing. Poor work, much worn. H. $1\frac{7}{8}$″.

Yo. 009. c. 3. Terra-cotta fr. of male head, moulded. Forehead high, narrow and bare; eyebrows very thick and prominent; eyes prominent, wide nostrils, straight thin moustache and curly beard round edge of jaw. Bold work. H. 2″. Pl. III.

Yo. 009. c. 4. Terra-cotta head and trunk of male fig. Eyes prominent. Hair parted in centre. Straight moustache, small imperial beard. Round neck strap from which hangs knife (?). H. $2\frac{1}{2}$″.

Yo. 009. d. Terra-cotta male face. Long narrow eyes, prominent. Straight, stiff moustache. Beneath ears are indications of hair, either whiskers or tufts brought round behind ears. Hair brushed up over forehead as Yo. 009. d. 1–7, with turban above. Top and back of head missing. Good detailed work. H. $\frac{3}{4}$″. Pl. III.

Yo. 009. d. 1–7. Terra-cotta female head from statuette, one of series. All these differ in details (cf. Yo. 009. h), but have common style of hair-dressing. Hair brushed straight up from forehead with central parting, making double pompadour. This kept in place by elaborate comb, consisting of decorated front bar with pendants at each end reaching below ears, and a cushion behind. From top and front of head hair, gathered in short pigtail, was brought between bar and cushion of comb and hung back over latter. Two short curls were curved out over cheeks almost to corners of mouth (not in all examples). Back hair fell straight; then was gathered in pigtail which was turned up to back of head and pinned over short pigtail that passed over cushion. See Yo. 0041. f, g. Front hair, forming pompadour after passing through comb, was brushed sideways and down over main mass of back hair. Cushion is four-pointed ingot-shaped.

Faces full and round; eyes long and narrow, *à fleur de tête*; mouths small with upturned corners; receding foreheads and chins.

Series includes Yo. 009. d. 1–7; 009. e. 1; 009. f; 0041. f, g, h, l, m. Length of face varies from $\frac{7}{8}$″ to 1″, and $\frac{3}{8}$″ to $\frac{1}{2}$″.

Yo. 009. d. 1. Pompadour complete. Curls on cheeks come almost to corners of mouth. Back of head missing. Eyebrows punctured, with dot between. Good work. H. $1\frac{3}{4}$″. *Yo. 009. d. 2.* Small, with fr. of bust. Rude work. Back missing. H. $1\frac{1}{4}$″. *Yo. 009. d. 3.* Small. From behind pompadour rises pigtail which falls over roll cushion and is met by long pigtail rising from nape. Side-hair looped over ears. Features rudely marked. H. $\frac{5}{8}$″. *Yo. 009. d. 4.* Small and very rude. Compass-incised eyes, str. slit mouth with punctured corners. Hair only suggested. H. $1\frac{1}{8}$″. *Yo. 009. d. 5.* Large. Pompadour complete; pigtail and back of head missing. Eyebrows punctured; features strongly incised. H. $1\frac{1}{4}$″. *Yo. 009.*

d. 6. Small head and bust. Pigtail missing. Elaborate ear-rings. Round neck narrow strip of fur (?) tied at back; two ends hanging down. Drapery only suggested. Poor work; worn. H. 1½″. *Yo. 009. d. 7.* Small and rude. Body preserved to waist. Front coiffure, and pigtail. Narrow belt over R. shoulder and diagonally across body. Drapery only suggested. H. 1⅜″.

Yo. 009. e. Terra-cotta female head in round. Hair in fringe and sq. topknot; pigtail behind looped up to crown. Cf. Yo. 009. h. Very rude work. H. 1$\frac{3}{16}$″.

Yo. 009. e. 1. Terra-cotta female head, as Yo. 009. d. 1, q. v. Most of hair and back of head missing. Eyebrows punctured, features strongly incised. H. 1½″.

Yo. 009. f. Small female head. See Yo. 009. d. 1–7. Coiffure mostly broken; back of head missing. Prominent curls on cheeks. Features rudely worked. H. 1″.

Yo. 009. g. Terra-cotta grotesque monkey head in round; eyes, ears, and cheeks in one plane, from which nose sharply projects. From each side of muzzle, moustache runs back to cheeks. Wears conical cap with short tail hanging from apex. H. ⅞″. Pl. I.

Yo. 009. h. Series of terra-cotta female heads, prob. from figs. resembling Yo. 2. Cf. *Anc. Khotan*, Pl. XLV, Y. 0031. Heads have much in common but are of three or four sizes, and owing to appliqué parts being taken from different moulds, and to tool-working on finished casts, show much individuality. In general, hair curves in front of ears to point not far from corners of mouth; on forehead either descends to point (009. h) or is cut away in a point (009. h. 9). Eyebrows are denoted by a slight ridge, generally with incised line, sometimes (009. h. 1) scored for hair. Eyes slanting, marked merely by slits (009. h. 12), or by slits with punctured hole, or compass-drawn circle (009. h. 8), or in high relief with puncture (009. h. 10). Noses small but rather broad; nostrils drilled. Mouths small, often with punctures at corners. Chins very full. Great variety in dressing of back hair (see separate numbers); but generally a topknot with short pigtail hanging from it and second main pigtail from back of head looped up again to crown. Jewelled band generally worn round this, and sometimes over top; or braid of hair takes its place. 009. h. 10 wears a cushion under the pigtail. For finest example see Yo. 0041. e; also Yo. 011. b, 0041. a–d.

Yo. 009. h. Over brows hair is in short pointed fringe; from centre of head it rises vertically in a plaited mass which is thrown backwards over a cushion. At base this tuft is bound with circlet of beads. Returning loop lost. Much worn. H. 2¼″.

Yo. 009. h. 1. Eyebrows ridged and scored; eyes prominent. Fringe cut away in point. Topknot bound by broad braid of hair above circlet of jewels. Where main tuft touches back of head it breaks up into three plaits, one broad, two narrow. Coarse work. H. 2⅜″. Pl. I.

Yo. 009. h. 2. Eyes very prominent. Pointed fringe; side-locks almost reach corners of mouth. Poor work. Back of head missing. H. 1¾″.

Yo. 009. h. 3. Eyebrows and vertical mark on forehead incised; eyelids ridged and incised. Pointed fringe, topknot (missing) bound with braid of hair. Back of head missing. Careful modelling. H. 1¾″.

Yo. 009. h. 4, 4. a, 4. b. Similar. Eyebrows ridged, eyes incised. Side-hair comes very far forward. Topknots and backs of heads missing. H. 1⅜″.

Yo. 009. h. 5. Eyebrows incised and scored, eyes incised. Pointed fringe, jewelled circlet, topknot; hair at back brushed from central parting towards shoulders. H. 2⅜″.

Yo. 009. h. 6. Eyebrows and eyelids incised, pupils punctured. Pointed fringe; jewelled circlet and jewels on topknot. Back of head missing. H. 2⅛″.

Yo. 009. h. 7. Low forehead. Eyebrows scored, eyeballs compass-drawn circles (no lids). Straight fringe; side-hair curves up along cheek-bones. Bead circlet, topknot, and looped-up pigtail. Rough work. H. 2″.

Yo. 009. h. 8. Eyes with incised outlines and compass-drawn pupils. Pointed fringe; jewelled circlet; topknot and back of head missing. H. 2⅜″.

Yo. 009. h. 9. Eyelids and eyebrows ridged. Fringe cut away in point. Bead circlet round topknot; hair brushed back from behind ears to nape of neck. Pigtail missing. H. 2½″.

Yo. 009. h. 10. Eyes pear-shaped and prominent (appliqué). Eyebrows ridged. Fan-like topknot, flatter than usual, and cushion supporting it. Traces of pigtail which is caught up. H. 2⅛″. Pl. I.

Yo. 009. h. 11. Small; much worn. Eyes prominent; eyebrows scored. Pointed fringe. Round head, jewelled (?) chaplet with tassel ends falling over ears. Topknot (missing) bound at base with braid of hair. Behind, hair falls in broad flat mass (unless this be meant for veil). Traces of necklace. H. 1$\frac{15}{16}$″.

Yo. 009. h. 12. Eyes closed (slits only). Straight fringe. Topknot and back of head missing. Mouth straight, not punctured. H. 1$\frac{15}{16}$″.

Yo. 009. h. 13. Eyes very prominent, with incised circles. Pointed fringe. Traces of bead circlet. Tail at back shows on upper part small bow, fastening it to smaller pigtail. H. 2½″.

Yo. 009. h. 14. Head and bust. Pointed fringe; bead circlet and topknot; returning loop of pigtail missing. Wears tight necklace and chain or stole crossed on breast. Very rude work. H. 2¼″.

Yo. 0010. a. Terra-cotta monkey lying as baby in low cradle, wrapped in swaddling bands; cradle has high perpendicular head with rounded top. Cf. Yo. 0038. a–d. Length 1½″. Pl. III.

Yo. 0010. b. Terra-cotta fr. of monkey, lying as baby in cradle swaddled. Lower part and under-side lost; remainder rubbed. Length $1\frac{1}{8}''$.

Yo. 0011. Terra-cotta appliqué mask of frowning demon with thick brows gathered into W shape; lips are drawn back, showing teeth in kind of snarl. Incised circles for eyes. H. $1\frac{1}{16}''$.

Yo. 0012. a. Terra-cotta appliqué mask, 'Gorgoneion' type. Head framed in circle of formal curls; lips curved up at corners; cheeks full. H. $1\frac{1}{2}''$. Pl. III.

Yo. 0012. b–k. Terra-cotta appliqué lion masks. Heads framed in hair and almost circular. *Yo. 0012. b.* Half only. Replica of Yo. 0027. b. H. $1\frac{15}{16}''$. *Yo. 0012. c.* Heavy moustache; puckered brow with deep-set eyes. Cf. *Anc. Khotan*, Pl. XLIV, Y. 0015; i. p. 215. H. 2″. *Yo. 0012. d.* High relief but poor work. Prominent muzzle. Edges much chipped. H. $1\frac{1}{2}''$. *Yo. 0012. e.* Flat relief. Large moustache; prominent eyes. All edges broken away. Much worn. H. $1\frac{3}{8}''$. *Yo. 0012. f.* Deep-set eyes with overhanging brows; retroussé muzzle; wide mouth ending in drilled circles. Coarse work, but strong. H. $1\frac{1}{4}''$. Pl. I. *Yo. 0012. g.* Heavy moustache and knotted brow. Hair parted in centre after human fashion (cf. *Anc. Khotan*, Pl. XLVII, Y. 009. j). H. $1\frac{7}{8}''$. *Yo. 0012. h.* Poor work. Much worn. H. $\frac{15}{16}''$. *Yo. 0012. i.* High relief. Well modelled. Ears large. H. $1\frac{15}{16}''$. *Yo. 0012. k.* Very poor work. Hair rendered by dots, and features also. H. $1\frac{1}{16}''$.

Yo. 0012. l. Terra-cotta appliqué ram's mask, with projecting pig-like muzzle and heavy curving horns. Part of framing of curls remains. H. $1\frac{1}{10}''$.

Yo. 0012. m. Terra-cotta appliqué lion mask in strong projection, grasping in jaws narrow band, which escapes at each corner of mouth. H. $1\frac{3}{8}''$; width $2\frac{1}{16}''$. Pl. I.

Yo. 0013. a. Terra-cotta fr., lower part of female fig. L. hand placed as in classical pudica type. H. $1\frac{1}{8}''$.

Yo. 0013. b. Terra-cotta fig., nude female torso. Head, arms, and legs moulded separately, missing. Breasts roughly indicated; belly prominent; punctured navel; pubes roughly scored. H. 3″.

Yo. 0014. a. Terra-cotta miniature amphora. Mouth boldly splayed. Handles have out-curved finials at both attachments. H. $\frac{11}{16}''$. Pl. III.

Yo. 0014. b. Terra-cotta miniature amphora. Replica of Yo. 0014. a, but only body and spring of one handle remain. H. $\frac{5}{16}''$.

Yo. 0014. c. Terra-cotta miniature amphora; body sharply angled, on shoulder vertical lines with dots between. H. $1\frac{1}{16}''$. Pl. III.

Yo. 0015. a. Terra-cotta fig. of camel (?) and rider; of latter only traces of legs remain. Very rough work. Camel has no humps and has lost fore-legs. H. $1\frac{7}{16}''$; length $2\frac{1}{2}''$.

Yo. 0015. b. Terra-cotta fig. of horse, fore-part, with rider; of latter only one leg remains clad in baggy breeches and shoes; horse very crude. Most of R. side split away. Cf. Yo. 0030. a. H. $1\frac{7}{16}''$.

Yo. 0015. c. Terra-cotta fr. of horse. Head and neck (L. side cast). Burnt and in part vitrified. H. $1\frac{3}{8}''$.

Yo. 0015. d. Terra-cotta camel's head and neck. R. half cast; neck abnormally long; reins incised along neck. Length $1\frac{3}{4}''$.

Yo. 0015. e. Terra-cotta fr. of head of horse. Face crude; harness shown by incised lines. Cf. Yo. 0030. a. H. 1″.

Yo. 0015. f–l. Terra-cotta handle of vessel, in form of grotesque beast. Fore-legs formed upper attachment with vessel, hind-legs the lower, body being grip. Two main types: (*a*) Ram-like head; short round ears; no horns; short curling mane rendered by crescent-shaped impressions, also used to denote whiskers. See *Anc. Khotan*, Pl. XLVII, B. 001. e. Rest of body smooth. (*b*) Head similar but with horse-like mane, rising to pointed tuft between ears; bar of hair across forehead; neck smooth; on fore-quarters wings, pointed, lying along flanks; v. *Anc. Khotan*, Pl. XLV, Y. 009. b. Several sizes represented, but fairly consistent with types.

Type (*a*) Yo. 0015. 1; 0017. a, b; 0030. d, e, f, g, i; 0045. c, d. Cf. Yo. 0045. e.

Type (*b*) Yo. 0015. f, f. 1, g, h, i, k; 0030. b, h; 0045. b, g.

Yo. 0015. f. Type (*b*). Head only, in perfect condition. $1\frac{1}{4}'' \times 1\frac{1}{2}''$. *Yo. 0015. f. 1.* See Yo. 0015. f. Hind quarters only; legs in one mass. Tail against flank, short and hairy. Small example. Length $1\frac{1}{16}''$. *Yo. 0015. g.* See Yo. 0015. f. Type (*b*). Hind quarters missing. Wings spring fr. circular orn. on either shoulder. H. $1\frac{7}{8}''$; length $2\frac{3}{8}''$. *Yo. 0015. h–i.* L. side casts of heads; see Yo. 0015. f. Type (*b*). Length $1\frac{1}{4}'' \times 1\frac{3}{8}''$. *Yo. 0015. k.* L. side cast of head; see Yo. 0015. f. Type (*b*). H. $1\frac{5}{12}''$. *Yo. 0015. l.* See Yo. 0015. f. Type (*a*). L. hand cast. Small scale. Legs broken off short. Length $1\frac{15}{16}''$.

Yo. 0016. a. Terra-cotta fig. Hoopoe. Long bill; crest at back of head; no legs. Wings closed. (Cf. *Anc. Khotan*, Pl. XLV, Y. 0012. i.) Detail incised. Rough work. Length 1″.

Yo. 0016. b. Terra-cotta miniature bird, on stand; wings spread above body as if in act of flight. Tail raised. Crest missing. Details roughly incised. H. $\frac{13}{16}''$.

Yo. 0016. c. Terra-cotta bird in same attitude as Yo. 0016. b. Upright crest on head; large bill, flat outspread tail; small arm-like wings raised above back. Body pierced as if for suspension. No stand. Length $\frac{3}{4}''$.

Yo. 0016. d. Terra-cotta bird in same attitude as Yo. 0016. b, but wings and plumage better indicated. Roughly modelled. Body pierced. Length $\frac{7}{8}''$.

Yo. 0016. e. Terra-cotta bird in attitude as Yo. 0016. b; but wings smaller and crest larger. Body pierced. Length $\frac{7}{8}''$.

Yo. 0016. f. Terra-cotta head of bird with upright, round-topped crest and triangular beak; no ears indicated. Hoopoe or peacock. H. $\frac{13}{16}''$.

Yo. 0016. g. Terra-cotta head of bird, as Yo. 0016. f; but slightly larger and has ears. H. $\frac{7}{8}''$.

Yo. 0017. a. Terra-cotta head. See Yo. 0015. f. Type (a). H. $1\frac{1}{2}''$.

Yo. 0017. b. Terra-cotta head. See Yo. 0015. f. Type (a). H. $\frac{7}{8}''$.

Yo. 0017. c. Terra-cotta fr. R. hand cast of neck of horse; has upright mane and incised rein on side of neck; neck itself covered with fur. Length $1\frac{1}{8}''$.

Yo. 0017. d. Terra-cotta fr. of head and throat of gryphon; tuft of hair at corner of mouth; curved beak-like muzzle. H. $1\frac{11}{16}''$.

Yo. 0018. a–c. Terra-cotta appliqué Gandharvī figs. from vase. Cf. *Anc. Khotan*, Pl. XLV, Kh. 003. b; B. 001. d. *c* is complete; *b* has lost lower half, *a* most of lotus flower-base. Tiara on head. Heavy necklace with pendant. Forearms raised, holding wreath. Cf. Yo. 0040, 0042. a. H. (*a*) $2\frac{1}{2}''$, (*b*) $1\frac{3}{8}''$, (*c*) $2\frac{11}{16}''$. Pl. I.

Yo. 0019. Terra-cotta circular stamp. Flat on one side, slightly convex on other; centre shows rectangular handle fractured close to surface. Flower; small rosette in centre; from this radiate long straight-edged, acute-angled petals. Cf. (in wood) Kha. ix. 0023. Diam. $2\frac{3}{4}''$. Pl. II.

Yo. 0020. Terra-cotta appliqué mask, resembling that of Bes, with deep-set eyes, short wide nose, long moustache, short but wide triangular beard; wears tiara with jewel. Outstanding hair (incised) forms circle round head. (Cf. *Anc. Khotan*, Pl. XLIII, Y. 0017, for general type.) H. $2\frac{1}{8}''$. Pl. I.

Yo. 0021. Terra-cotta fr. of neck of vase; cf. Yo. 0059, with nude female fig. playing the guitar and dancing. (Cf. *Anc. Khotan*, Pl. XLIV, Y. 0019, fig. on R. of fr.) H. of fig. $1\frac{1}{2}''$.

Yo. 0022. Terra-cotta fr. of vase, with wreath appliqué. Half-round section. Alternate bands of lotus-petals (?) and small leaves, separated by berries. For western analogy, cf. Quibell, *Excavations at Saqqara* (1909). Pl. XXXVI. 3. Length $1\frac{9}{16}''$. Pl. III.

Yo. 0023. a. Terra-cotta rhyton, or spout from vessel, in form of ox's head, the horns turned inwards. Body curves up from head. Very rude conventional work. Length $3\frac{1}{2}''$. Pl. II.

Yo. 0023. a. 1. Terra-cotta ox-head spout, as Yo. 0023. a, but smaller. Body curves down from head. Length $1\frac{11}{16}''$.

Yo. 0023. a. 2. Terra-cotta fr. of large ox-head spout. R. horn, end of muzzle, and all lower mould missing. Body curves up from head. Length $3\frac{1}{4}''$. Pl. II.

Yo. 0023. a. 3. Terra-cotta fr. of small ox-head spout. Length $1\frac{1}{2}''$.

Yo. 0023. b. Terra-cotta fr. of handle of vessel, in form of nondescript animal (horse ?). At junction with body is appliqué anthemion. Length $2\frac{5}{8}''$. Pl. II.

Yo. 0023. c. Terra-cotta fr. of vessel, with half of well-moulded anthemion ornament. At stalk of this is small knob of clay suggesting berry. $2'' \times 2\frac{1}{4}''$. Pl. III.

Yo. 0023. d. Terra-cotta fr. of handle of vase, orn. with alternate diagonal bands of two incised lines and single line of dots. At point of junction with body nondescript animal head; it has single horn growing up from crown of head, and long snout. See *Anc. Khotan*, Pl. XLV, Kh. 003. 1. Length $2\frac{1}{4}''$.

Yo. 0023. e. Terra-cotta fr. of vessel. Spout in form of monkey's head of naturalistic type. Hair incised, eyes deep-set. Length $1\frac{3}{4}''$.

Yo. 0024. a–q. Terra-cotta appliqué masks from vases; grotesque human faces. See Yo. 001. *Yo. 0024. a.* Replica of Yo. 001. n. H. $1\frac{3}{16}''$. *Yo. 0024. b.* Replica of Yo. 001. d. H. $1\frac{1}{8}''$. *Yo. 0024. c.* Vertical groove in forehead; mouth short and straight; replica of Yo. 001. g. H. $1\frac{3}{4}''$. *Yo. 0024. d.* Long face; vertical groove and V in forehead; corners of mouth turned down. See Yo. 0024. q. H. $1\frac{1}{8}''$. Pl. III. *Yo. 0024. e.* Replica of Yo. 001. d. H. $1\frac{13}{16}''$. *Yo. 0024. f.* Replica of Yo. 001. c. H. $1\frac{13}{16}''$. *Yo. 0024. g.* Dimples at corners of mouth; hair over forehead, less flat than usual. H. $1\frac{1}{8}''$. *Yo. 0024. h.* Lips very thick, hair more nearly upright than usual. Replica of Yo. 001. f; 0044. e. H. $1\frac{1}{8}''$. *Yo. 0024. i.* Very small face, with peaked features; rude work, apparently mostly modelled. H. $1''$. *Yo. 0024. k.* Small. Hair very slightly worked; features set and not smiling, corners of mouth turned down. H. $1''$. *Yo. 0024. l.* Poor condition, unusually large. Details marked by bored holes; cf. Yo. 001. u. 1; 0044. c. H. $1\frac{1}{2}''$. *Yo. 0024. m.* Covering junction of lower end of handle with body of vessel. Ribbed fr. attached above (wing ?). Nose very prominent; eyes small; lips naturalistic. H. $1\frac{5}{16}''$. Pl. III. *Yo. 0024. n.* Well and carefully modelled; replica of Yo. 0024. g. Eyes prominent in long sockets; double dimples at corners of mouth; pointed ears. H. $1\frac{1}{4}''$. Pl. III. *Yo. 0024. o.* Small; detail mostly perished. H. $1\frac{1}{8}''$. *Yo. 0024. p.* Replica of Yo. 0024. n, but in bad state. H. $1\frac{1}{16}''$. *Yo. 0024. q.* Replica of Yo. 0024. d. See Yo. 001. H. $1\frac{1}{16}''$.

Yo. 0025. a. Terra-cotta appliqué lion's head mask; framed in circular curls; heavy moustache. Cf. *Anc. Khotan*, Pl. XLIV, Y. 0015. Yo. 0043. c is from same mould. Fine bold work. H. $1\frac{11}{16}''$.

Yo. 0025. b. Terra-cotta appliqué lion's head mask with moustache; naturalistic; less circular and less flat than Yo. 0025. a. Brows, eyes, and moustache show development on preceding example. H. $2\frac{1}{8}''$. Pl. II.

Yo. 0025. c. Terra-cotta appliqué lion's head mask, framed by flat formal circle of curls; has no moustache. H. $1\frac{3}{8}''$.

Yo. 0025. d. Terra-cotta appliqué lion's head mask. Circle of curls here formed of small solid knobs like rivet heads, within which border of scored hair. (This series a–d shows gradual degeneration and increasing artificiality.) H. $1\frac{1}{2}''$.

Yo. 0025. e–h. Terra-cotta small appliqué lion's head masks; formal type; but good. Mouth slightly open; brow puckered; eyes full and prominent. Set in circle of formal curls. All much worn except (h). H. $\frac{3}{4}''$. Pl. III.

Yo. 0025. i. Terra-cotta appliqué lion mask in high relief. Features well represented but without detail. Eyes deep-set; heavy roll of flesh over mouth (not rendered as hair). Corners of mouth pierced right through. A little incised hair below ears. H. 2″. Pl. II.

Yo. 0026. Terra-cotta fr. of female head, front part. Head-dress of double string-like fillet from which rise three large loops of same. On either side of face long hair falling outwards to shoulders and then curled inwards to cheeks. Round ear-rings with central boss. Classical features. Small but fine example of Gandhāra type. H. $\frac{15}{16}''$. Pl. III.

Yo. 0027. a. Terra-cotta appliqué mask, 'frowning demon' type, approaching nearly to lion of Yo. 0043. b. Low relief; lower L. hand corner and edges generally lost. From same mould is Yo. 0043. d. Cf. *Anc. Khotan*, Pl. XLIV, Y. 0016, similar though differing in detail. H. $1\frac{5}{8}''$.

Yo. 0027. b. Terra-cotta appliqué mask. Lion, much humanized; brows drawn down V-wise between eyes; straight set mouth; knobby cheeks, framed by formal curls. From same mould, Yo. 0012. b. H. $1\frac{11}{16}''$.

Yo. 0028. a. Terra-cotta fr. of pot, with grotesque face modelled on it. Eyebrows very high ridges with hair indicated by incised lines. Eyes narrow slits. Point of nose grotesquely curled up; mouth small. Formal curled moustache rendered in outline by incision. H. $1\frac{7}{8}''$; breadth $2\frac{3}{4}''$. Pl. II.

Yo. 0028. b. Terra-cotta fr. of human head (male?), with hair marked by series of stamped curves. $2'' \times 1\frac{3}{8}''$.

Yo. 0028. c. Terra-cotta head of monkey in cradle. Cf. Yo. 0038. c. No modelling or detail. H. $\frac{3}{4}''$. Pl. III.

Yo. 0029. Terra-cotta fore-part of camel, well worked. Saddle-cloth indicated by incised markings. Mane incised; hair scored. H. $1\frac{1}{2}''$. Pl. III.

Yo. 0030. a. Terra-cotta fig. horse and rider. Rider (all above waist lost) wears baggy breeches fastened at knee, and ankle shoes. Back legs of horse lost. Saddle and harness in relief. Horse's head bad; body heavy; legs not distinguished. Cf. Yo. 04. a. H. (horse's head) 2″. Pl. I.

Yo. 0030. b. Terra-cotta handle of vase. See Yo. 0015. f, type (*b*). Fore-legs and hind quarters missing. Fine example. Length $2\frac{15}{16}''$. Pl. II.

Yo. 0030. c. Terra-cotta fr. head of peacock. Beak and crest broken. Bird has ears, whence hang tassels; also string collar with stud behind. Plumage rendered by stamped crescents and incised lines. Cf. Yo. 0061. Length $2\frac{5}{8}''$.

Yo. 0030. d–i. Terra-cotta handles of vase. *Yo. 0030. d.* See Yo. 0015. f, type (*a*). Lower fore-legs and hind-legs missing. Hairy tail coiled on R. flank. No whiskers. Length $3\frac{13}{16}''$. *Yo. 0030. e.* See Yo. 0015. f, type (*a*). fore-part alone remains; fore-legs and muzzle gone. Length $2\frac{1}{4}''$. *Yo. 0030. f.* See Yo. 0015. f, type (*a*). Hind quarters missing. Hair shown on flanks by diagonal incisions. Length $3\frac{3}{4}''$. *Yo. 0030. g.* See Yo. 0015. f, type (*a*). Head only. Very good work. Length $2\frac{1}{2}''$. *Yo. 0030. h.* Head only. See Yo. 0015. f, type (*b*). H. $1\frac{1}{8}''$. *Yo. 0030. i.* See Yo. 0015. f, type (*a*). Head only. Small scale. Length $1\frac{3}{16}''$.

Yo. 0030. k. Terra-cotta fr. head of horse; reins, etc., incised. Cf. Yo. 0030. a. H. 1″.

Yo. 0031. a. Terra-cotta monkey, naturalistic type; hands clasped before face. Body below waist takes form of large phallus. Good detailed work. H. $\frac{14}{16}''$.

Yo. 0031. b. Terra-cotta monkey, owl type, squatting on heels. Arms (broken) apparently raised in attitude of prayer. Hair incised back of shoulders down centre of chest and back. Wears loin-cloth. Cf. Yo. 003. a, b, etc. H. $1\frac{1}{16}''$.

Yo. 0031. c. Terra-cotta monkey. Resembles Yo. 0031. b, save for absence of hair. R. leg missing. H. $\frac{7}{8}''$. Pl. III.

Yo. 0031. d. Terra-cotta monkey, naturalistic type. Hands clasped; legs twisted up behind back in attitude of swimming on skin. Cf. Yo. 0031. e. Length $\frac{9}{16}''$. Pl. III.

Yo. 0031. e. Terra-cotta monkey, naturalistic type. Hands clasped; legs stretched behind in attitude of swimming on skin. Pierced for suspension. Good work. Cf. Yo. 0031. d. H. $\frac{5}{8}''$. Pl. III.

Yo. 0031. f. Terra-cotta monkey, owl type. Seated. Hands clasped; legs lost. Cf. *Anc. Khotan*, Pl. XLVII, Y. 0011. g, 0013. e. H. $\frac{11}{16}''$. Pl. III.

Yo. 0032. a. Terra-cotta monkey, crude naturalistic type, playing guitar. All below waist lost. Cf. *Anc. Khotan*, Pl. XLVI, Yo. 009. i. H. $1\frac{3}{16}''$.

Yo. 0032. b. Terra-cotta monkey, playing syrinx. L. side of face and shoulder, and all below waist missing. Rough work. H. $1\frac{7}{8}''$.

Yo. 0032. c. Terra-cotta monkey, owl type; wears loin-cloth; beats drum beneath his L. arm. Head thrown back in mock enthusiasm. H. $1\frac{1}{5}''$.

Yo. 0032. d. Terra-cotta monkey, naturalistic type, seated, playing guitar. Head turned slightly R. Careful miniature work. H. $\frac{3}{5}''$.

Yo. 0032. e. Terra-cotta monkey, owl type, seated, playing syrinx. L. leg lost. H. $\frac{7}{8}''$.

Yo. 0033. a. Terra-cotta monkey, owl type; holds drinking (?) horn to mouth. H. $1''$.

Yo. 0033. b. Terra-cotta monkey, owl type; holds syrinx (?) to lips. All below hips lost. Cf. *Anc. Khotan*, Pl. XLVI, B. 002. H. $\frac{17}{24}''$.

Yo. 0033. c. Terra-cotta monkey; very rude naturalistic type. Hands raised, holding pile of discs (musical instrument ?) beneath chin. All below waist lost. H. $1\frac{1}{2}''$.

Yo. 0034. a. Terra-cotta monkey. Rough work. L. arm bent; hand placed on mouth; R. arm swung slightly forward. Lower limbs lost. Perhaps type of Yo. 003. a, q. v. H. $1''$.

Yo. 0034. b. Terra-cotta monkey, naturalistic; upper part from hips. L. hand placed on mouth; R. arm (broken) swung slightly forward. Hair incised. Perhaps type of Yo. 003. a, q. v. H. $1\frac{3}{20}''$.

Yo. 0034. c. Terra-cotta monkey, upper part. Naturalistic type, but very rough. L. hand laid on mouth; R. on chest. All below hips missing. Perhaps of type Yo. 003. a, q. v. H. $1\frac{3}{8}''$. Pl. III.

Yo. 0034. d. Terra-cotta monkey, owl type. R. hand raised to mouth; L. holds phallus. Cf. *Anc. Khotan*, Pl. XLVII, Y. 0025. H. $\frac{15}{16}''$. Pl. III.

Yo. 0035. a–z. Terra-cotta frs. from figures of monkeys. Bodies (where preserved) in squatting attitude. All sizes from $1\frac{3}{4}''$ to $\frac{5}{8}''$. Perhaps type of Yo. 003. a, b, etc. *Yo. 0035. a.* Owl type, wearing loin-cloth. Both arms and legs lost. Ithyphallic. H. $\frac{11}{16}''$. *Yo. 0035. b.* Owl type. Squatting; wears loin-cloth; both arms and L. leg broken. H. $\frac{3}{4}$. *Yo. 0035. c.* Squatting: hands on knees; wears loin-cloth. Head missing. H. $\frac{11}{16}''$. *Yo. 0035. d.* Miniature naturalistic type. Knees drawn up under chin which rests on hands; pierced for suspension. H. $\frac{1}{2}''$. *Yo. 0035. e.* Naturalistic type. Arms broken close to shoulders; body at waist. H. $1\frac{1}{4}''$. *Yo. 0035. f.* Head with long moustache in relief, imperial, and pointed seamed cap; but brows, muzzle, and ears of monkey. Cf. Yo. 0035. o. H. $\frac{7}{8}''$. Pl. III. *Yo. 0035. g.* Human face with incised moustache, imperial, and eyebrows, and narrow eyes. Wears cap. Hair incised over body. R. arm broken near shoulder; L. arm and shoulder quite gone. Body broken at waist. H. $1\frac{1}{16}''$. *Yo. 0035. h.* Head of monkey; naturalistic type. H. $\frac{15}{16}''$. *Yo. 0035. i.* Head (naturalistic type), and part of trunk. H. $\frac{5}{8}''$. *Yo. 0035. j.* Owl type. Squatting; arms stretched to front but broken; legs broken; head turned $\frac{3}{4}$ R. H. $\frac{15}{16}''$. *Yo. 0035. k.* Head with long ass-like ears and sharply pointed skull. H. $\frac{3}{4}''$. *Yo. 0035. l.* Naturalistic type. Seated. legs spread at R. angles. Body shapeless, arms lost. H. $1\frac{3}{4}''$. *Yo. 0035. m.* Front cast of female; breasts marked by five dots pentagon-wise. Between breasts is a long vertical notched line. Arms and all below navel gone. H. $1\frac{5}{16}''$. *Yo. 0035. n.* Miniature; naturalistic type. Arms and all below hips missing. H. $\frac{1}{2}''$. *Yo. 0035. o.* Head with cap having short pigtail, moustache, and imperial; but with overhanging brow, muzzle, and pointed ears of monkey. H. $\frac{11}{16}''$. Pl. III. *Yo. 0035. p.* Head. Very good lifelike work. Eyes impressed circles; nostrils punctured; mouth deeply cut with punctured corners. Ears small and well set. H. $\frac{9}{16}''$. Pl. III. *Yo. 0035. q.* Naturalistic. Seated; arms lost; legs mere stumps, grotesquely thick. Head turned R. H. $1\frac{1}{8}''$. *Yo. 0035. r.* Naturalistic head. H. $\frac{5}{8}''$. *Yo. 0035. s.* Head. Rough and much defaced. H. $\frac{9}{16}''$. *Yo. 0035. t.* Head, naturalistic, with part of trunk. H. $1\frac{1}{8}''$. *Yo. 0035. u.* Terra-cotta front cast of monkey, holding oval object (syrinx ?) beneath chin. Crude naturalistic type. Cf. *Anc. Khotan*, Pl. XLVI, B. 002. H. $\frac{13}{16}''$. *Yo. 0035. v.* Head, rude, with pigtail. H. $\frac{7}{16}''$. *Yo. 0035. w.* Naturalistic type. Female. Accidentally crushed in making; breasts flattened. R. arm outstretched (but broken); L. hanging by side. Pubes marked. H. $1\frac{1}{2}''$. *Yo. 0035. x.* Head. Rough work. H. $\frac{5}{8}''$. *Yo. 0035. y.* Front cast of head. Visor-like overhanging brow. H. $\frac{11}{16}''$. *Yo. 0035. z.* Owl type. Short pigtail hanging forward over brow; arms and all below hips missing. H. $1\frac{3}{8}''$.

Yo. 0036. Terra-cotta head of cat. Broken away at shoulders. H. $1\frac{1}{4}''$.

Yo. 0037. a. Terra-cotta torso of fig. (human or monkey ?), wearing loin-cloth. Arms outstretched but broken near shoulders. Legs gone. On back traces of water-skin (?). H. $1\frac{5}{8}''$.

Yo. 0037. b. Terra-cotta squatting monkey, of type of Yo. 303. a, b, q. v. Head, R. arm, and legs missing. L. hand on lap holds rounded object. H. $\frac{13}{16}''$.

Yo. 0037. c. Terra-cotta monkey; front cast of head, with short outstanding ears, prominent eyes. Human type (not prognathous). H. $\frac{1}{2}''$.

Yo. 0038. a. Terra-cotta monkey, as baby in cradle; lower part lost. Cf. Yo. 0010. a, b. H. $\frac{15}{16}''$.

Yo. 0038. b. Terra-cotta monkey, owl type; as baby in cradle, but without usual 'swaddling clothes', as in Yo. 0038. a. H. $1\frac{3}{16}''$.

Yo. 0038. c. Terra-cotta monkey, as baby in cradle. Only head remains. Worn. H. $\frac{13}{16}''$.

Yo. 0038. d. Terra-cotta fr. monkey, as baby; wrapped up and bound by two transverse bands. H. $\frac{7}{8}''$.

Yo. 0039. a. Terra-cotta bird, with large beak and crest, and folded wings (hoopoe). Pierced for suspension. H. $\frac{1}{2}''$.

Yo. 0039. b. Terra-cotta miniature amphora. One handle and base-ring lost. Volute attachment at base of handle. H. $\frac{9}{16}''$. Pl. III.

Yo. 0039. c. Terra-cotta miniature amphora. Rounded base-knob; both handles lost. Rough. H. $\frac{9}{16}''$.

Yo. 0039. d. Terra-cotta miniature oenochoë, with pinched lip and body orn. with spiral fluting. Handle lost. H. $\frac{7}{8}''$.

Yo. 0039. e. Terra-cotta head of bird (hoopoe) with large crest. Beak broken. H. $1\frac{1}{8}''$.

Yo. 0039. f. Terra-cotta fr. of miniature vase. Slender foot, lathe-turned body with hexagonal shoulder. Neck and most of handle missing. H. $\frac{11}{16}''$. Pl. III.

Yo. 0039. g. Terra-cotta fr., consisting of six short spokes at R. angles. Four lost. Rest have couple of notches near their ends. Prob. from miniature piece of furniture. Length of spoke $\frac{3}{4}''$.

Yo. 0039. h. Terra-cotta fr. of handle, in form of beast (? bear). Body stamped all over with small curves indicating woolly fur. H. $1\frac{7}{8}''$.

Yo. 0039. i. Pottery fr. of handle, in form of eel-like creature with out-curved gaping jaws, long pointed ears, and round goggle eyes. Length $2\frac{1}{4}''$. Pl. II.

Yo. 0039. k. Triangular fr. of red pottery, covered with thin slip of same colour but faced with creamy surface; orn. with elaborate but very conventional foliage pattern in relief. Straight bands, voluted stems, having close-set narrow spine-like leaves. $3\frac{3}{4}'' \times 2\frac{3}{4}''$. Pl. IV.

Yo. 0039. l. Fr. of ornamental pottery. Orn. divided into two by horizontal appliqué cable band. Below this, fr. of incised lotus flower, profile view, strongly Egyptian in style. Above, appliqué relief. Vase with fluted body rests on concave-topped stand (relief above broken away); on L., draped knee of kneeling human fig. Cf. Foucher, *L'Art du Gandhâra*, fig. 211. Scene represents worship of Buddha's alms-bowl. $1\frac{7}{8}'' \times 1\frac{3}{4}''$. Pl. I.

Yo. 0040. Terra-cotta appliqué fig. of Gandharvī. Halo behind bare head. Large ear-rings. Fore-arms raised to hold wreath. Wears short jacket; lower points in front blown open. Lotus base. Cf. *Anc. Khotan*, Pl. XLV, B. 001. d, and Yo. 0018, 0042. a. H. $2\frac{1}{8}''$. Pl. I.

Yo. 0041. a–e. Terra-cotta heads of female figs. See Yo. 009. h. *Yo. 0041. a.* Eyes in prominent relief. Pointed fringe. No band to topknot. Lower L. side of face chipped; back of head missing. H. $2\frac{1}{4}''$. *Yo. 0041. b.* Eyebrows and eyelids incised. Pointed fringe. Jewelled circlet round topknot and jewelled string binding it vertically. Pigtail looped up from behind and caught by bow. Good work, but worn. H. $2\frac{1}{8}''$. *Yo. 0041. c.* Eyebrows punctured; eyes in relief. Fringe cut away in triangle. Double circlet of beads round topknot, and jewelled string binding it vertically. Pigtail looped up from behind and caught by bow. Good work. H. $2\frac{5}{16}''$. Pl. I. *Yo. 0041. d.* Eyebrows incised and scored; eyes in relief with compass-incised pupils. Narrow straight fringe. Bead circlet with braid of hair above round topknot; this together with back of head missing. H. $1\frac{9}{16}''$. *Yo. 0041. e.* Eyebrows ridged and scored; eyes well modelled. Fringe cut away at parting, marked by very fine waved lines. From top of head hair falls straight in front of ears and over back of head to neck. On top of head hair gathered into flat 'plate', from front of which a short tail is carried over to back of crown where it meets long plaited tail turned up from nape of neck. Very careful and delicate work; mouth especially far finer than in other figs. H. $2\frac{1}{4}''$. Pl. I.

Yo. 0041. f. Terra-cotta female head, large. See 009. d. 1–7. Pompadour; comb missing. From behind springs pigtail supported by cushion and falling down back of head, under main pigtail looped up to meet it. Features good but damaged. Tassel ear-rings. H. $1\frac{1}{2}''$. Pl. I.

Yo. 0041. g. Terra-cotta female head, large. See Yo. 009. d. 1–7. Pompadour supported by frame; short tail passes over cushion; longer tail rises from nape, and the two are secured behind cushion. Detailed and clear example of this fashion. Side-curls on cheeks; tassel ear-rings. Features rather indistinct. H. $1\frac{1}{2}''$. Pl. I.

Yo. 0041. h. Terra-cotta male head; bald forehead; ridged almond eyes; long thin moustache. Back of head missing. H. $1\frac{3}{8}''$.

Yo. 0041. i. Terra-cotta female head, small; see Yo. 009. d. 1–7. Features very rudely marked. Rosette before topknot; end of pigtail with bow. H. $1\frac{5}{16}''$.

Yo. 0041. k. Terra-cotta small male head and bust, with hair upright over forehead and cut short at nape of neck behind. Straight moustache. Much worn. H. $1\frac{3}{32}''$.

Yo. 0041. l. Terra-cotta small female fig., with upright coiffure. See Yo. 009 d. 1–7. Breasts bare; lower part of fig. and pigtail missing. H. $1\frac{5}{8}''$.

Yo. 0041. m. Terra-cotta small female head. See Yo. 009. d. 1–7. Shows four-cornered cushion supporting pigtail (missing). H. $\frac{11}{16}''$. Pl. I.

Yo. 0041. n. Terra-cotta fr. of human head, cast from front mould. Full Indian type of face. On head diadem, possibly an inverted lotus, but resembling Uraeus crown; central snake seen in front with head outstanding in relief Fig. might therefore represent a Nāga. Good work. H. $\frac{13}{16}$. Pl. III.

Yo. 0042. a. Terra-cotta fr. of neck of vase, orn. with appliqué relief of Gandharvī. Tiara on head. Fore-

arms raised to hold wreath; body nude. Much worn. Cf. *Anc. Khotan*, Pl. XLV, B. 001. d, and Yo. 0018, 0040. H. 3″.

Yo. 0042. b. Terra-cotta fr. of appliqué male fig., to L. p., wearing diadem. Both arms apparently uplifted to L. p. H. $1\frac{7}{8}$″. Pl. I.

Yo. 0043. a. Terra-cotta appliqué, Gorgoneion. Set in circle with short radiating spikes; outside this another circle of round beads (i.e. conventional curls); wears bristly moustache. Orig. diam. $2\frac{1}{2}$″. Pl. IV.

Yo. 0043. b. Terra-cotta appliqué lion mask. Same mould as Yo. 0027. b, q. v. H. $1\frac{3}{4}$″.

Yo. 0043. c. Terra-cotta fr. of appliqué lion mask. Eyes and brow lost. Same mould as Yo. 0025. a, q. v. H. $1\frac{1}{4}$″.

Yo. 0043. d. Terra-cotta fr. of appliqué lion mask. All below nostrils, and edge of whole lost. Same mould as a, q. v. H. $\frac{15}{16}$″.

Yo. 0043. e. Terra-cotta appliqué lioness's mask in high relief. Summary but very naturalistic and individual work. H. (of relief) $\frac{7}{8}$″. Pl. I.

Yo. 0043. f. Terra-cotta fr. of appliqué lion mask, from base of handle of vase. From R. side half palmette on short stalk curves upwards; prob. balanced by another on L. $2\frac{1}{8}$″ × $1\frac{11}{16}$″.

Yo. 0044. a–f. Terra-cotta appliqué masks from vases; grotesque human faces. See Yo. 001. *Yo. 0044. a, b.* Apparently replicas; dimples on cheeks; imperfect. Length $1\frac{1}{2}$″ and $1\frac{1}{4}$″. *Yo. 0044. c.* Nostrils bored; eyes unusually large; big ear-rings. H. $1\frac{3}{16}$″. *Yo. 0044. d.* Mouth straight without dimples. Type of Yo. 001. d. H. $1\frac{1}{8}$″. *Yo. 0044. e.* Replica of Yo. 0024. h, 001. f. H. $\frac{7}{8}$″. *Yo. 0044. f.* Lower part broken away. Type of Yo. 0044. a. H. $1\frac{1}{8}$″. *Yo. 0044. g.* Mouth turned down at corners; small ring eyes. H. $\frac{7}{8}$″.

Yo. 0045. a. Terra-cotta fig. horse with rider. Of rider one leg and seat left; horse heavily proportioned and has lost all legs. Much worn. Length $2\frac{1}{2}$″.

Yo. 0045. b. Terra-cotta handle. See Yo. 0015. f, type (*b*). Head, neck, fore- and hind-legs missing. Variant. Hind quarters decorated with whorl rosette and crescent fur markings; end in hoof-shaped mass. Length $2\frac{13}{16}$″.

Yo. 0045. c, d. Terra-cotta handles. See Yo. 0015. f, type (*a*). All below fore-legs missing. Fore-legs show attachment to vase. Length $2\frac{3}{4}$″.

Yo. 0045. e. Terra-cotta fr. of handle, in form of two grotesque animals side by side. Cf. Yo. 0015. f, type (*a*). Length 2″. Pl. II.

Yo. 0045. f. Terra-cotta fr. L. side cast of horse's head and neck. Cf. Yo. 0030. a. Length $1\frac{1}{8}$″.

Yo. 0045. g. Terra-cotta fr. L. side cast of horse's head. See Yo. 0015. f, type (*b*). Length $1\frac{3}{8}$″.

Yo. 0046. a. Terra-cotta fig. of female monkey; nude and squatting on heels; 'pudica' attitude. Hair not marked. Bracelets on wrists. Fairly careful work. H. $1\frac{3}{4}$″. Pl. III.

Yo. 0046. b. Terra-cotta female monkey; nude, seated on ground. Legs short stumps. R. arm outstretched but broken; L. arm wholly gone. Hair incised on loins and arms. Breasts prominent, marked with stamped circle and dots; pudenda emphasized. Features roughly rendered. H. $2\frac{1}{2}$″.

Yo. 0046. c. Terra-cotta fr. statuette of pregnant woman (or female monkey?). Head, L. arm, and lower part of body with legs lost. Breasts small but prominent; belly very large; navel marked by incised circle with surrounding dots. Cf. Yo. 0013. b. H. $1\frac{7}{8}$″. Pl. II.

Yo. 0047. a. Terra-cotta head and bust of monkey; miniature, naturalistic type; playing guitar. Cf. *Anc. Khotan*, Pl. XLVI, Y. 009. i. H. $\frac{1}{2}$″.

Yo. 0047. b. Terra-cotta monkey, playing guitar. Arms and all below hips missing. Crude, naturalistic type. Cf. Yo. 003. l, and *Anc. Khotan*, Pl. XLVI, Y. 009. i. H. $\frac{3}{4}$″.

Yo. 0048. a–f. Terra-cotta pairs of miniature figs., nude, in symplegma. Monkeys (faces in *a* and *b* carefully rendered); sex shown by pigtails (*e* and *f*). Both figs. in *a* and *b* have tails. See Yo. 002. a–n; *Anc. Khotan*, Pl. XLVII, Y. 0012. a. ii, etc. *Yo. 0048. a.* Naturalistic type, good careful work. Hair incised, features life-like. Both have tails. Legs of one fig. broken. H. $\frac{7}{8}$″. Pl. III. *Yo. 0048. b.* Naturalistic type. Hair marked by incisions. Face carefully worked. Bodies good. Both have tails. One fig. has lost head. H. $\frac{7}{8}$″. *Yo. 0048. c.* Both heads lost. H. $\frac{3}{4}$″. *Yo. 0048. d.* Heads and extremities of legs missing. H. $\frac{5}{8}$″. *Yo. 0048. e.* One has pigtail. Rough work. H. 1″. Pl. III. *Yo. 0048. f.* Head of one fig. and lower legs of both lost. Face rude. Pigtail. H. 1″.

Yo. 0049. a. Terra-cotta camel, with two bales bound by broad strap between humps. Hair scored. Very rude work. H. $1\frac{5}{16}$″. Pl. III.

Yo. 0049. b. Terra-cotta camel, bearing load (of water-skins?). Head of camel and great part of load lost. Only mane indicated. Cf. *Anc. Khotan*, Pl. XLVII, Y. 009. l. H. $2\frac{7}{16}$″.

Yo. 0049. c. Terra-cotta fr. of camel. All fore-part from hump, and legs, lost. Hair scored. Length $2\frac{1}{4}$″.

Yo. 0050. Terra-cotta monkey, naturalistic type. Large phallus curls from behind and is held to breast. See *Anc. Khotan*, Pl. XLVII, Y. 009. q. i. H. $\frac{7}{8}$″. Pl. III.

Yo. 0051. a. Terra-cotta monkey. R. arm raised and hand placed on L. side of face. L. arm and lower part of fig. lost. Rough work. Perhaps of type of Yo. 003. a, q. v. H. $1\frac{3}{8}$″. Pl. III.

Yo. 0051. b. Terra-cotta monkey. Body below breast, and R. arm lost; L. arm raised and hand laid on L. temple. Summary but lively work. Perhaps type of Yo. 003. a, q. v. H. $\frac{15}{16}''$.

Yo. 0051. c. Terra-cotta monkey, upper part of. R. arm raised and hand placed on R. cheek; L. arm and lower limbs, lost. Realistic work. Perhaps type of Yo. 003. a, q. v. H. $1\frac{1}{2}''$.

Yo. 0052. a–p. Terra-cotta frs. of monkeys. *Yo. 0052. a.* Naturalistic type. Rough. Lower part of body, R. arm, L. forearm lost. H. $1\frac{1}{8}''$. *Yo. 0052. b.* Small; owl type; hands clasped before breast. From waist down missing. H. $\frac{17}{32}''$. *Yo. 0052. c.* Head; naturalistic type; good work. H. $\frac{7}{16}''$. Pl. III. *Yo. 0052. d.* Owl type; L. arm outstretched but broken; R. arm and both legs lost. H. $1''$. *Yo. 0052. e.* Head; naturalistic type; rough. H. $1\frac{3}{16}''$. *Yo. 0052. f.* Head; good naturalistic type. L. ear and side of face missing. H. $1\frac{1}{4}''$. *Yo. 0052. g.* Head wearing helmet or hat with high, narrow crest. Very rough. H. $\frac{7}{8}''$. *Yo. 0052. h.* Seated with knees drawn up (legs broken off short); L. hand on L. temple; R. on R. thigh. H. $1''$. *Yo. 0052. i.* Crude naturalistic type. R. arm and shoulder, L. arm just below shoulder, and lower part of body with legs, lost. H. $1\frac{13}{16}''$. *Yo. 0052. k.* Crudest naturalistic type. Head and fr. of trunk only. Much worn. H. $1\frac{1}{8}''$. *Yo. 0052. l.* Head and bust (remainder with arms lost). Naturalistic type. H. $1\frac{5}{16}''$. *Yo. 0052. m* Small, seated. Legs apart; arms lost. Crudest naturalistic type. H. $\frac{11}{16}''$. *Yo. 0052. n.* Naturalistic type. R. arm and body below waist lost; front of body without fur marking. H. $1\frac{3}{16}''$. *Yo. 0052. o.* Front cast of head and R. shoulder. On forehead remains of tiara; band surmounted by round objects (? jewels). Rough work. H. $1\frac{1}{4}''$. *Yo. 0052. p.* Small; naturalistic type. Arms and legs lost. H. $1\frac{3}{8}''$.

Yo. 0053. Terra-cotta miniature water-skin. Front sewn up; neck tied round plug or stopper. Length $1\frac{9}{16}''$.

Yo. 0054. a. Terra-cotta head of bird (peacock?), with long straight beak and high feathered crest; detail of latter worked out on R. side, not on L. H. $1\frac{7}{16}''$.

Yo. 0054. b. Terra-cotta head of bird (hoopoe?), with high crest. Beak broken off short; has well-marked ear. H. $1''$.

Yo. 0055. a. Fr. of pottery. Above, incised leaf pattern. Below, moulded heart-shaped orn. with double fillet and dot-border; inner bands curl to make formal leaf orn. based on acanthus scheme; dot-flower centre. $3\frac{3}{4}'' \times 2\frac{3}{8}''$. Pl. I.

Yo. 0055. b. Terra-cotta fr. of vessel; orn. with fruit on stalk (?), appliqué, hanging vertically. Above is stamped orn. of two concentric circles with outer circle of dots. $1\frac{7}{8}'' \times 1''$.

Yo. 0055. c. Pottery-jug; small hand-made model of brownish ware with horizontal pebble burnishing. Neck and handle lost. H. $1\frac{3}{8}''$.

Yo. 0055. d. Pottery; small hand-made model of pot. Bulb-shaped body; plain everted lip. Rough. H. $1\frac{1}{2}''$.

Yo. 0055. e. Fr. of pottery. Slate-grey wheel-made orn. with encircling band of three raised mouldings. Length $2''$.

Yo. 0055. f. Fr. of fine red pottery. $1'' \times \frac{7}{16}''$.

Yo. 0055. g. Fr. of red pottery, hard-fired, but slightly coarse; outer face is covered with thin, white slip. $1\frac{1}{4}'' \times 1\frac{1}{4}''$.

Yo. 0055. h. Fr. of red pottery, hard-fired. $1\frac{15}{16}'' \times \frac{15}{16}''$.

Yo. 0056. Terra-cotta fr. of vessel, in shape of squatting human fig. Only knees remain, with edge of upper skirt. Edges of drapery incised. Between knees protrudes object, either phallus, or grotesque head of small animal carrying the human fig.; cf. Yo. 0070. H. $1\frac{1}{2}''$; width $1\frac{3}{4}''$.

Yo. 0057. Terra-cotta handle, lower part of. Junction with body covered by fine palmette running downwards, from end of which two volute ornaments curl upwards supporting small anthemion. Strong classical influence. Length $3''$. Pl. II.

Yo. 0058. Pottery fr. of large hand-made vessel; coarse drab clay. At top band of chevrons, enclosing circles (incised); below is slightly raised band orn. with pairs of punched holes; below this affixed large mastiff's head, mouth slightly open showing teeth and tongue. Very fine bold work, practically in the round. H. of relief $2\frac{9}{16}''$; width $3\frac{7}{16}''$. Pl. II.

Yo. 0059. Terra-cotta neck of vase (upper part lost), orn. with two narrow sunk bands. Above is band of dot-and-circle orn.; below is series of appliqué figs. (1) Elephant with trunk turned over back, supporting two kneeling figs. upon lotus flowers. (2) Bird upon bunch of grapes. (3) Standing fig. robed to feet, playing on some instrument. (4) Human fig. riding upon horned (?) beast. (5) Lost, except head; prob. replica of 3. (6) Replica of 4. Appliqué work; very worn and blunt; details quite lost. H. $2\frac{15}{16}''$; lower diam. $2\frac{1}{2}''$.

Yo. 0060. Pottery; small jug, hand-made, in sand-brown ware with single handle from shoulder to top of neck, pinch-in lip, and flat base. Just above greatest circumference of body is broad band enclosed by single incised lines. Above this, space is divided into three equal parts by double vertical lines with row of dots on either side. In each space is low curve marked by double lines below which are two rows of dots. Greek influence. H. $3\frac{3}{16}''$. Pl. IV.

Yo. 0061. Terra-cotta fig. of peacock, large moulded, with long straight beak, high square crest and folded wings. Legs lost; eye-marks on tail and crest. Hole through beak; triangular opening between wings. Prob. unguent-flask. H. $4\frac{1}{4}''$; length $5\frac{1}{2}''$. Pl. II.

Yo. 0061. a. Terra-cotta head of peacock, as Yo. 0061, but beak shorter and blunter. H. $2\frac{1}{4}''$.

Yo. 0062. Terra-cotta grotesque head of monkey, playing guitar. Body that of bird with folded wings. H. $1\frac{1}{8}''$. Pl. III.

Yo. 0063. Terra-cotta female monkey, squatting and giving suck to young. With R. arm she nurses another monkey, swaddled and lying in cradle. Both arms and head of female, and head of small monkey lost. Moulded; fine work. H. $2''$. Pl. I.

Yo. 0064. Terra-cotta moulded fig. of boar. L. half only. Faithful naturalistic work. Length $2\frac{1}{8}''$. Pl. III.

Yo. 0065. a–g. Stucco relief frs. of railing, or parapet, moulded in relief; consisting of sq. panels between upright posts which are grooved down centre and terminate top and bottom in knob. Panels orn. with sunk square (in outline). Along base of whole runs plain border. Fine drab clay. Length $1\frac{1}{8}''$ to $2\frac{15}{16}''$; average width $1\frac{1}{8}''$.

Yo. 0066. Terra-cotta appliqué half-length fig., wearing long-sleeved, loose-breasted tunic and playing harp held against L. shoulder. Cf. Yo. 02 (larger figs.). H. of fig. $1\frac{1}{2}''$. Pl. III.

Yo. 0067. Terra-cotta appliqué from vase. Female head, full-face, with 'topknot' coiffure. Very fine execution. For type cf. Gandharvī, *Anc. Khotan*, Pl. LIV, D. I. 90. H. $1''$. Pl. III.

Yo. 0068. Terra-cotta appliqué relief from vase. Man L. carrying water-jar on L. shoulder. H. $1\frac{3}{4}''$.

Yo. 0069. Terra-cotta miniature jug, with long beak-like spout, small round body and single handle, with thumb-piece. H. $\frac{3}{4}''$.

Yo. 0070. Terra-cotta grotesque appliqué group. Monkey (head alone appears) carrying on his shoulders female monkey (wearing trousers) who carries young monkey in L. arm and grotesque bird in R. Bold work; female head very fine. H. $3\frac{7}{8}''$. Pl. I.

Yo. 0071. Terra-cotta fig. of Yak, bearing load of faggots (?). Crudest possible style of modelling. Length $3''$.

Yo. 0072. Terra-cotta fr. of 'winged gryphon' handle, broken across wing and fore-legs. Usual type of head, etc. L. half of cast only. Length $2\frac{3}{4}''$.

Yo. 0073. Terra-cotta fig. of woman. Head, L. arm and feet lost. Body clothed in dress covering upper part and arms closely. Round waist is serpent belt with four pear-shaped pendants behind; below belt the skirt of dress widens out into bell-shape, the sides being slit. Beneath this, double apron with embroidered edges hangs down behind and in front; legs show indications of trousers. R. arm bent at elbow and brought across body, prob. beating a drum held under lost L. arm. On R. shoulder are three ribbons secured by demon mask (brooch ?). Hair in two pigtails behind. Good moulded and appliqué work. H. $2\frac{3}{4}''$. Pl. I.

Yo. 0074. Terra-cotta fr. of bird, breast and wing of (cf. Yo. 0061). Feathers marked by small incised curves. $1\frac{13}{16}'' \times 1\frac{1}{16}''$.

Yo. 0075. Terra-cotta head of horse. Moulded; hair, reins, etc., indicated by incised lines. Conventional work. H. $\frac{11}{16}''$; length $1\frac{3}{16}''$.

Yo. 0076. Terra-cotta appliqué from vase; head and breast of human fig.; wears turban and necklace falling on breast. H. $1\frac{1}{2}''$.

Yo. 0077. Terra-cotta fr. of handle, in form of monster's head. Mouth open and swallowing. Length $1\frac{15}{16}''$.

Yo. 0078. Terra-cotta fr., moulded; meaning uncertain. H. $1\frac{3}{4}''$.

Yo. 0079. a–b. Terra-cotta appliqué from vase. Two lion masks, (*a*) much worn and stained. H. (*a*) $1''$; (*b*) $\frac{13}{16}''$.

Yo. 0081. Heavy cast bronze orn., suggestive of mace-head, but too roughly made for that purpose. Tubular, externally of hexagonal section. For rather more than half of its length, plain. Then expands into larger hexagonal body, of which the flat faces occur over the angles of shank. Each face carries a blunt lozenge pyramidal point. Junction of body with shank is furnished with a sq. moulding of very slight projection. Transition from faces of shank to intervals between hexagonal faces of body, effected by overhanging triangular faces. Geometrical forms resulting from the construction rather involved and interesting. Seems to have served purpose of a ferrule, being pierced throughout, and had some terminal member. Well preserved. Length $3''$; diam. of shank $1\frac{1}{5}''$; internal diam. $\frac{3}{4}''$; weight 11 oz. Pl. VII.

Yo. 0082. Grey steatite fr. of miniature Stūpa. Two umbrella-like tiers from crown. Lower edge of upper tier cut in sort of billet orn. Top broken off. Inside roughly cut out in dome shape narrowing into hole. H. $1''$; diam. of base $1\frac{1}{4}''$. Pl. VII.

Yo. 0083. Stucco relief fr. of lotus wreath, with strong frontal curve. On front, large boss-like flower is applied. Cf. Kha. ii. 002. Single rows of petals between plain fillets. Red clay. $3\frac{1}{4}'' \times 1\frac{5}{8}''$.

Yo. 0084. Terra-cotta head and bust of monkey. Eyes mere circle and dot; hair dressed in female fashion roughly indicated. Rudely modelled. H. $2\frac{1}{8}''$.

Yo. 0088. Flat triangular stone, light brown, surface entirely covered with fine irregular natural markings. See also Yo. 00110 for larger specimen. Base of triangle $\frac{1}{2}''$; base to apex $\frac{7}{16}''$; thickness $\frac{1}{8}''$.

Yo. 0089. Seal of yellowish-white pebble. Four-sided, and roughly pyramidal in shape, with fret design cut on base. The apex does not reach a point but is rounded over. Hole pierced horizontally from side to side for string, by which it was worn. Edges rounded, and

the whole polished with wear. Design same as *Anc. Khotan*, Pl. L, A. 001. c. Base $\frac{11}{16}''$ sq.; h. $\frac{11}{16}''$. Pl. V.

Yo. 0091. a. Slab of pale green jade, with design carved on face. This represents human fig. seated cross-legged on mat; L. arm bent upwards from elbow across chest and holding upright in hand bundle resembling Roman 'fasces'. R. arm also bent up at elbow and hand supporting 'fasces' at side. Fig. wears robe with skirt ending in embroidered band below knee. Veil over head, which sweeps out in wide curve on L. side and is caught in by L. elbow. Flat cap with orn. in front and hair hanging down side of head. Face, $\frac{3}{4}$ profile, sq. cheek. Nose and mouth rendered in elementary fashion by angular lines, and pupils by straight line across eyeball. No ears or neck. Treatment generally flat, and curved lines on small scale avoided. $2\frac{1}{32}'' \times 2\frac{3}{16}''$; thickness $\frac{5}{16}''$. Pl. VII.

Yo. 0091. b. Cast ornamental bronze stud, cartouche-shape, with remains of three iron rivets attached to back. Form somewhat rococo. In proportions, a square; R. and L. sides chamfered and concave from above downwards, the forward edges of each chamfered surface projecting slightly but sharply from adjoining surface, and its ends curving outwards at top and bottom. Between flanking chamfers two billet-shaped pieces, convex in all directions. Between billets, and marking centre of cartouche, two vertical reed mouldings.

Well modelled and cleanly cast. Good condition. $\frac{3}{8}''$ sq. Pl. VI.

Yo. 0092. Four-sided pyramidal object of yellow bone, apex flat. On top, a diamond is cut; and from each of the four ridges running down to corners of base, five slanting lines are cut, upon each side, to base; so that each corner of pyramid is orn. with a series of five inverted V-shaped grooves. Smooth and polished. Possibly a chessman or something of the kind. Base $\frac{3}{4}''$ sq.; h. $\frac{1}{4}''$.

Yo. 0093. Elliptical chalcedony intaglio, flat. Peacock in profile, to L. Body represented by circular drill-hole, to front and bottom of which are added neck and legs. Tail rendered by five straight lines springing close together from back of circular body, and spreading apart, each with ball at the end. Not subtle but effective. $\frac{1}{2}'' \times \frac{3}{8}''$. Pl. V.

Yo. 0094. Ruby intaglio, one side straight, one elliptical. Convex. Basin with sq. handles, on column. Two doves perched on rim, one drinking, one standing upright. Rough work. $\frac{9}{16}'' \times \frac{5}{16}''$. Pl. V.

Yo. 0096. a. Elliptical garnet intaglio, plano-convex. Bust (of warrior?) to L., wearing cuirass and shoulder-pieces, and large plain round helmet with brim and long drooping plume. Prob. Roman work (cf. figs. of Urbs Roma, etc., on late Imperial coins). $\frac{3}{8}'' \times \frac{9}{32}''$. Pl. V.

Yo. 0096. b. Elliptical garnet intaglio, plano-convex. Animal advancing L., apparently a dog. From his back rises what may be a wing. But slight projections from the rounded end seem to indicate a gryphon's head rudely designed; in which case this would be a chimera. Rough work. $\frac{9}{32}'' \times \frac{11}{32}''$. Pl. V.

Yo. 0096. c. Elliptical garnet intaglio, plano-convex. Male figure facing (?), apparently draped; both arms extended and bent at the elbow. Head very large. Roughest possible work, subject almost indistinguishable; perhaps, intentionally grotesque. $\frac{5}{16}'' \times \frac{1}{4}''$. Pl. V.

Yo. 0098. Elliptical cornelian intaglio, flat. Wild boar, galloping L.; R. fore-leg bent up under body, head down. Spirited work. $\frac{15}{32}'' \times \frac{3}{8}''$. Pl. V.

Yo. 0099. Elliptical ruby intaglio, plano-convex. Nude male fig. standing on R. foot which points R.; body front; head turned L. L. leg bent at knee and held up across R. leg. Fillet round head. Arms outstretched from shoulders and holding in hands twisted fillet or drapery which forms hoop over head, the ends falling in angular streamers on either side. Bangles on arms Apollo (?). Fairly good work. $\frac{9}{16}'' \times \frac{7}{16}''$. Pl. V.

Yo. 00100. Elliptical garnet intaglio, flat. Animal standing L., four-footed, with long tail, prick ears and apparently a long straight horn and a wing of oriental type. Roughest possible work, subject almost indistinguishable. $\frac{11}{32}'' \times \frac{5}{16}''$. Pl. V.

Yo. 00101. a. Part of lapis lazuli ring. One side flat, the other slightly convex and orn. with four small circles inlet in gold. Diam. of outer circle $\frac{9}{16}''$; inner $\frac{5}{16}''$. Pl. IV.

Yo. 00101. b. Flat piece of mother-of-pearl cut in diamond shape. In field, but not exactly in centre, a compass-incised circle. Prob. for inlay work. $\frac{3}{8}'' \times \frac{9}{32}''$; thickness *c.* $\frac{1}{64}''$.

Yo. 00104. Bronze appliqué orn., of same kind as Yo. 0091. b. Flat plate with three studs behind for attachment. On front, vigorous design (raised) of horse and rider. Horse with legs outstretched at full gallop; rider with head bent forward and drapery (?) flying back in the wind. Irregularly scalloped edges defined by raised scroll, which forms flame-like bosses at meeting-point of each scallop. Plentiful traces of gilding. Fine bold work but somewhat corroded. $1\frac{1}{16}'' \times \frac{3}{4}''$. Pl. VI.

Yo. 00105. Lead orn., cast solid. Hoopoe perched on top of two ovoid fruits. Gr. M. $\frac{13}{16}'' \times \frac{7}{16}''$. Pl. VI.

Yo. 00107. Bronze appliqué orn. (?), as Yo. 0091. b. and Yo. 00104. Thin sq. plate with two pins remaining behind and traces of two others. Corroded. No traces of design left. $\frac{3}{4}''$ sq.

Yo. 00109. a. Circular paste intaglio, flat. Animal kneeling to L. Possibly a humped bull, but more probably belongs to winged animal series; cf. Yo. 0096. b, 00100, 00109. b. Very rough work. Surface perished. Diam. $\frac{7}{16}''$. Pl. V.

Yo. 00109. b. Circular paste intaglio, flat. Deer with branching horns walking L. Poor work. Diam. $\frac{3}{8}''$. Pl. V.

Yo. 00110. Stone, of same kind as Yo. 0088, and with same markings. Irregular shape. Gr. M. $1\frac{1}{16}'' \times \frac{15}{16}'' \times \frac{3}{8}''$.

Yo. 00113. Fr. of whitish jade, possibly one side of a rectangular buckle. Surface orn. with two grooves cut parallel to edges, space between them filled in by series of close-set cross-lines. This orn. continued along adjoining sides; but these are broken off. Underneath, at each corner, two holes bored slantwise into the jade, meeting each other in its thickness, and not reaching the other side. Through this, thread passed, sewing buckle to belt (?). Carefully and smoothly finished. $1\frac{15}{32}'' \times \frac{1}{4}''$; $\frac{5}{32}''$.

Yo. 00114. Bugle bead of black glass, part of. Has been broken in two lengthways, and one-half lost. Round it, at each end, ran a set of three lines inlaid in white paste; inside these again a line of red; and in the centre, a yellow festooned line. Length $\frac{7}{8}''$; diam. was $\frac{3}{8}''$; thickness of glass $\frac{1}{8}''$. Pl. IV.

Yo. 00115. Opaque glass end of polychrome bugle bead. Round drum a zigzag line of white on reddish-brown. H. $\frac{1}{4}''$; diam. $\frac{3}{8}''$.

Yo. 00116. Disc of green glass, semi-transparent, fused. Bright blue-green iridescence. Diam. $1'' \times \frac{7}{8}''$; thickness $\frac{1}{8}''$.

Yo. 00117. a. Circular intaglio of banded chalcedony, flat. Humped ox walking to L. Fairly good work but with much use of drill. $\frac{5}{16}'' \times \frac{1}{4}''$. Pl. V.

Yo. 00117. b. Circular garnet intaglio, plano-convex. Uncertain device. From a crescent base rises a short circular stem bearing a crescent whose inner curve shows three upright projections. Behind is object somewhat resembling a large nail. Diam. $\frac{5}{16}''$. Pl. V.

Yo. 00118. Bronze bird, perhaps pigeon, cast solid. Legs thickened into sort of pedestal. Condition bad, but incised lines to show feathers on back, wings, and tail, still visible. Traces of gilding. Tail to tip of beak $1\frac{13}{16}''$. Pl. VII.

Yo. 00119. White soapstone fr., showing human eye R., carved in relief with eyebrow, part of cheek, and remains of large ear. Complete double line round eye. Curious V-shaped groove in cheek below. Flat. $1'' \times \frac{11}{16}''$; thickness $\frac{1}{8}''$. Pl. VI.

Yo. 00120. Relief fr. in white soapstone of fig. broken off below waist. Head-dress tied in just above head, then bulging into great rounded topknot; surface plain. Tresses of hair down sides of face divide into sections showing waves. R. arm hanging down, broken at wrist. Sleeve wide at top. Position of L. arm uncertain, being almost entirely broken off. Back of fr. flat, but lines are cut indicating roughly main lines of fig. Halo behind head, much broken. $1\frac{1}{8}'' \times \frac{9}{16}''$; thickness nearly $\frac{3}{16}''$. Pl. VI.

Yo. 00121. Steatite miniature Stūpa, crown of; in dull purple-grey steatite. Beneath, four-sided base or pedestal, round bottom of which were carved apparently two lines of sunk squares. Above runs line of 'billet' orn. (possibly meant to suggest brickwork). Then plain band, then another line of billet, and again plain band. Each band overhangs the band beneath.

Round edge of platform thus formed, are carved eight figs.—a Buddha seated cross-legged with hands in lap on each of the sides, and a monster-headed bird standing at each corner. Buddha figs. slope slightly forward; and breasts and heads of birds also are stretched well upwards and out, thus carrying up outward lines of pedestal. Head-dresses of Buddhas possibly differ in two instances, but these are slightly defaced. Wings of birds are curved backwards. The Buddhas are carved out nearly in the round.

Above, the crown of the Stūpa rises in four umbrellas, the lowest and largest resting on the heads of the figs. Round lower edge of each runs a band of bead orn. with incised line above. Work very carefully and skilfully executed. Hole pierced downwards through the centre of the whole, from top to bottom. H. $1\frac{15}{16}''$; gr. diam. $\frac{7}{8}''$. Pl. VI.

Yo. 00122. Part of pendant lead orn. (?) in openwork. $\frac{3}{4}'' \times \frac{23}{32}''$.

Yo. 00125. Round bead of red-yellow cornelian, orn. with design of circles, etc., in white. Cf. also Khotan, 02. q, r. Diam. $\frac{1}{2}''$; h. $\frac{3}{8}''$. Pl. IV.

Yo. 00126. a, b. Agate beads. (*a*) **Long barrel-shaped bead.** Upper half dark brown with blue line round widest part, lower semi-transparent grey. Length $\frac{7}{8}''$; gr. diam. $\frac{7}{16}''$. (*b*) **Lentoid bead,** smaller. Chiefly white; bright brown round one end. Length $\frac{3}{8}''$; gr. diam. $\frac{7}{32}''$.

Yo. 00127. Fourteen small gold frs., (*a*) Ball of solid gold with ring attached at top. From end to end $\frac{5}{16}''$. (*b*) Claw setting for jewel. Gr. M. $\frac{5}{16}''$. (*c, d*) Two thin discs with loops for suspension. Diams. $\frac{3}{8}''$ and $\frac{5}{16}''$. (*e*) Circular piece of gold foil, battered and broken. Prob. also a disc orn. Diam. $\frac{5}{16}''$. (*f*) Another piece of gold foil, $\frac{1}{4}$ disc shape. Prob. part of larger disc orn. Radius *c.* $\frac{3}{8}''$. (*g*) A small strip of gold foil edged on each side with granulated wire, and with small ring projecting in the middle for suspension, perhaps, of jewel or disc orn. $\frac{5}{8}'' \times \frac{1}{8}''$. (*h*) A small bit of granulated wire, prob. broken off the last. $\frac{5}{16}'' \times \frac{1}{32}''$. (*j*) Small strip of gold foil bent into hook. $\frac{1}{4}'' \times \frac{1}{16}''$. (*k*) Half a hollow gold bead, with two holes pierced in it. $\frac{1}{8}'' \times \frac{3}{32}''$. (*l*) Tiny fr. of gold foil, *c.* $\frac{1}{16}''$ sq. (*m, n, o*) Three pieces of rough gold; $\frac{3}{16}''$ sq.; $\frac{5}{32}'' \times \frac{1}{16}''$; and $\frac{1}{8}'' \times \frac{3}{32}''$. Pl. VI.

Yo. 00129. Bronze miniature model of jug (?), neck, beak, and handle of. Handle runs out level with rim, and then down at right angles. From length of downward part, jug was obviously high and narrow. Beak short; solid. Length of downward part of handle $\frac{9}{16}''$; length of level part of handle $\frac{1}{4}''$; diam. of neck *c.* $\frac{3}{16}''$.

Yo. 00130. Small round flat lead pellet. A weight (?). *C.* $\frac{3}{8}$" × $\frac{11}{32}$" × $\frac{3}{32}$".

Yo. 00133. Octagonal style (?) of white jade. One end tapering to a round point, the other slightly bevelled and then cut across. Length 4$\frac{7}{16}$"; gr. diam. $\frac{1}{4}$".

Yo. 00134. Relief fr. of grey soapstone. Human face, short and round. Ears of moderate length. Nose worn almost flat. Hair done in topknot, and treatment plain. Eyes very long and narrow. *C.* $\frac{3}{4}$" × $\frac{5}{8}$" × $\frac{1}{4}$". Pl. VI.

Yo. 00135. Spinning-whorl of dark grey stone, dome-shaped but turning slightly in towards foot and with concave bottom. Latter is orn. with series of double 'horseshoe' orns. running round hole. One horseshoe is inside the other, and down middle of each pair is line ending in dot. Same kind of pattern (elongated) is repeated on upper surface of dome; and round narrowing lower part series of crescent-shaped lines, standing on end. Pattern all over carelessly and inaccurately cut. H. $\frac{3}{4}$"; gr. diam. *c.* 1$\frac{1}{4}$".

Yo. 00138. White soapstone relief, being half tympanum of arch. At L. bottom corner is palm-leaf capital supporting lintel, whereon line of chevron orn. which was also continued round curve of tympanum but is largely broken away. In field to L., a palm-tree (?); in centre grotesque fig. advancing R. Wears cap (or long hair), bead necklace; stole, which passes behind back, crosses inside R. elbow and flies free; breech clout (?), and anklet on L. leg. L. hand holds vase; R. hand touches this; knees bent. Fig. perhaps bearded. Orig. height 1$\frac{1}{2}$"; width at base 1$\frac{1}{8}$"; thickness $\frac{3}{16}$". Top missing. Pl. VI.

Yo. 00139. Cast lead figurine of camel with two humps. Coarse. H. $\frac{13}{16}$". Pl. VI.

Yo. 00140. Small white steatite orn., strip of bead, slightly curved. From end to end $\frac{11}{16}$".

Yo. 00141. Bronze seal, with small, thin, pierced, loop handle. On face in intaglio single Chin. char. in modern form, 良 *liang* 'good, gentle', prob. as a personal name. The character not being cut reversed, impression gives reversed form (L. C. Hopkins). Face $\frac{5}{8}$" × $\frac{7}{16}$". H. $\frac{3}{16}$". Pl. V.

Yo. 00142. Bronze D-shaped seal with shank at back for suspension. S-shaped counter-change pattern. $\frac{7}{8}$" × $\frac{5}{8}$".

Yo. 00143. Round bronze seal with stud behind. Design, a deer with antlers, L. Much defaced. Diam. *c.* $\frac{7}{8}$". Pl. V.

Yo. 00144. Round bronze seal, with remains of shank behind. Design; bead orn. round edge; in field, tiger (?) R. fore-paw raised, head thrown up and back over R. shoulder. Good attitude, but work considerably effaced. Diam. $\frac{13}{16}$" to $\frac{7}{8}$". Pl. V.

Yo. 00145. Sq. bronze seal, without shank. Part of edge broken, and hole through field. Fine design of lion seated, fore-paw raised heraldically, tail ending in three tufts, mouth open as if roaring. Round this sq. border of single sunk line. *C.* 1$\frac{1}{16}$" sq. Pl. V.

Yo. 00146. Sq. bronze button, with wide shank placed diagonally. Face plain except for inner border of single line of bead orn. $\frac{7}{8}$" sq. Thickness $\frac{1}{16}$" Pl. VI

Yo. 00147. Bronze fr. of finial orn. (?). Adjoining halves of two arches or volutes, which spring from common base. On these rests another pointed arch with scalloped edge, its field showing remains of relief design now indistinguishable. The whole corroded. Plentiful traces of gilding. Gr. M. 1$\frac{1}{16}$" × 1$\frac{1}{8}$"; thickness $\frac{1}{8}$". Pl. VI.

Yo. 00148. Side of bronze buckle (?), much corroded. Remains of three teeth on one side and four on other (?). Length 1$\frac{11}{16}$".

Yo. 00149. Three frs. of bronze orns., apparently accidentally stuck together. Each consists of small crescent-shaped bar with thickened ring round middle. From this, on convex side of crescent, projected a small stud which passed through another ring. Perhaps ends of pendants. Tip to tip $\frac{9}{16}$" to $\frac{11}{16}$". H. *c.* $\frac{1}{2}$".

Yo. 00150. Half of flat sq. bone seal. Device apparently of four spirals, radiating from centre, one filling each corner. Of these two remain. $\frac{11}{16}$" × (broken) $\frac{5}{16}$" × *c.* $\frac{1}{8}$".

Yo. 00151. Elliptical onyx intaglio with bevelled edge. Device, tiger or Cheetah, advancing L. Rough work. $\frac{11}{32}$" × $\frac{9}{32}$".

Yo. 00152. Fr. of white jade, perhaps end of buckle. Surface flat and plain edges on one side chamfered. Ogee arch-like top. 1$\frac{1}{16}$" × $\frac{5}{8}$" × $\frac{3}{16}$".

Yo. 00153. Fr. of blown glass vessel. Translucent green flashed with dark red on concave side. Gr. M. $\frac{13}{16}$"; thickness $\frac{1}{16}$".

Yo. 00154. Spheroid cornelian bead, as Yo. 00125, but plain. Roughly cut. Diam. $\frac{3}{8}$" × $\frac{5}{16}$".

Yo. 00156. Small oblong slab of black steatite. Hole bored through each corner. Traces of incised circles round these holes on one side. 1$\frac{15}{32}$" × $\frac{23}{32}$" to $\frac{25}{32}$" × $\frac{3}{16}$".

Yo. 00157. Small sq. slab of black steatite. Wide bevel taken off upper surface. Base $\frac{5}{8}$" sq.; top $\frac{3}{8}$" sq.; thickness $\frac{3}{16}$".

Yo. 00158. Small oblong slab of light steatite. One short side bevelled, showing pale green interior. Hole bored longitudinally. $\frac{15}{16}$" × $\frac{5}{8}$" × $\frac{1}{8}$" to $\frac{3}{16}$".

Yo. 00159. Seal of yellowish white soapstone. For shape and material, cf. Yo. 0089; but here a carefully cut shank rises from flat back of seal. Device, a crane (?), L., with ruffled-up wings and small triangular tail. Base *c.* $\frac{5}{8}$" sq. H. $\frac{1}{2}$". Pl. V.

Yo. 00160. Sq. bronze seal with part of shank behind. Face divided into four equal squares, filled respectively by a quatrefoil, a Svastika, a diagonal cross, and a trefoil fleur-de-lis (placed diagonally). 1$\frac{1}{8}$" × 1$\frac{3}{16}$". Pl. V.

Yo. 00161. Bronze fr. as Yo. 00148. Much corroded. Length $1\frac{1}{8}''$.

Yo. 00162. Fr. of bone comb with round top. Teeth broken off just below start. Above, on each side, runs row of five sunk rings, each with inner sunk ring and central dot. The row is bounded above and below by two incised grooves. Hole pierced near middle of top. H. $1\frac{1}{4}''$; length $1\frac{7}{16}''$.

Yo. 00163. Small disc of bone. Just inside edge three incised circles, but edge has been cut down, so that for half circumference there is only one. In centre, a dot sunk with three concentric rings round it. In centre of back, lathe-hole. Diam. *c.* 1″.

Yo. 00164. Bronze orn. in shape of lotus bud, bound together near bottom. Hollowed out behind with projecting stud. Poor condition. H. $1\frac{1}{8}''$; width *c.* $\frac{5}{8}''$.

Yo. 00165. Figurine of sheep in white soapstone. Collar round neck. Very fine naturalistic work. H. *c.* $\frac{11}{16}''$. Pl. VI.

Yo. 00166. Soapstone fig. of monkey, human type, on flat base. Kneels on R. knee, L. bent up. L. elbow rests on L. knee, and hand supports R. elbow. R. hand supports cheek. Halo. Greyish-white soapstone. H. $\frac{15}{16}''$. Pl. VI.

Yo. 00167. Grey soapstone fr. Back half of fig. of bird, showing folded wings and large upright tail. Good style. H. $\frac{15}{16}''$.

Yo. 00168. Grey slate fr. Surface convex, showing part of decorated band in relief, and of raised band with groove down middle. Gr. M. $\frac{7}{8}''$.

Yo. 00170. Round iron button (?) without shank. Very bad condition. Diam. $\frac{9}{16}''$.

Yo. 00171. Fr. of glass bead, dark blue, translucent (?). Gr. M. $\frac{3}{8}''$.

Yo. 00172. Round flat stone with traces of colour on face. Diam. *c.* $\frac{1}{2}''$.

Yo. 00173. Cast bronze object, plated with gold and engraved. Prob. leg of small stand. General form reminiscent of lion or bull leg common in Persian art. Lower end hoof-shaped with raised cincture round its upper edge. From this proceeds upwards a ridge (the shin) broadening out at upper and lower ends. The crowning member is two flat bands slightly overhanging each other. Plan of foot semi-circular, of upper member approx. rectang. Whole well designed and executed. Much of the gold rubbed off. H. $5\frac{5}{8}''$; gr. diam. $1\frac{3}{8}''$. Pl. VII.

Yo. 00174. Bronze Janus head, solid. Flat cap with peaks over foreheads and ears. Faces somewhat worn. Beneath neck large loop for suspension. Use ?. Length $2\frac{5}{16}''$; forehead to forehead $1\frac{1}{2}''$. Pl. VII.

Yo. 00175. Hexagonal cut-glass bead. H. *c.* $\frac{1}{2}''$; gr. diam. $\frac{7}{8}''$.

Yo. 00176. Crescent-shaped bronze pendant; stylized development of two-headed bird design. Cf. Khot. 007 for further degeneration. In middle of concave side, projection formed by small thick crescent lying on its back represents two birds' heads. In middle of convex, another, formed of two out-curling leaves with third (straight) between, represents feet and tails. In each projection, hole for suspension. Gr. M. $1\frac{7}{8}''$.

Yo. 00177. Pottery jug, prob. resembling *Anc. Khotan*, Pl. XLIII, Y. 0024, when complete. From flat bottom swells out to wide shoulder, then curves over quickly to slender neck. Latter lost and broken edge cut smooth. On shoulder, mark of base of single handle; opposite, on other side of neck, remains of appliqué orn. Reddish-drab clay. H. $3\frac{5}{8}''$; to shoulder $2\frac{1}{4}''$; diam. of base $2\frac{3}{4}''$; at shoulder *c.* $4\frac{1}{2}''$; diam. of neck orifice $1\frac{1}{2}''$.

Yo. 00178. Pottery vessel, wheel-made. Flat bottom; sides rising in somewhat convex line to turn of shoulder, where they slope out to form upper member, now broken away. Within this, from shoulder of vessel, walls close in with slightly concave slope to plain round mouth with thickened edge. In this concave shoulder four holes are pierced, opposite one another, varying from $\frac{9}{16}''$ to $\frac{3}{4}''$ in diam. Use doubtful. Perhaps for incense; or possibly a flower-vase. H. $3\frac{1}{8}''$; to shoulder $2\frac{1}{16}''$; diam. of base $2\frac{3}{4}''$; shoulder *c.* $3\frac{3}{4}''$. Pl. IV.

Yo. 00179. Terra-cotta fig. of squatting monkey (modelled). R. leg, R. arm, and L. hand lost; but last was apparently at chin. H. $\frac{9}{16}''$.

Yo. 00180. Terra-cotta monkey, naturalistic type, sitting with knees drawn up. Cf. Yo. 06. c, 0032. d, and 00181. Both arms lost. Fine miniature modelling. H. $\frac{11}{16}''$.

Yo. 00181. Terra-cotta monkey, naturalistic type, seated in meditation. Knees drawn up, and elbows resting on them. Hands evidently supporting head, but R. hand gone and L. arm below elbow. Very finely finished by hand; features life-like; fur rendered by rows of small incisions. H. $\frac{11}{16}''$. Pl. III.

Yo. 00182. Terra-cotta appliqué head. Turban high, with large round jewel orn. in front. From centre of latter come two folds which are drawn down as bandeaux on each side of face. Mouth straight. Ears broken. H. $1\frac{3}{8}''$. Pl. III.

Yo. 00183. Terra-cotta fr., perhaps foot of cradle. Cf. Yo. 0010. a. Only folds of bed-clothes round feet. Length (broken) $\frac{3}{4}''$; width (broken) $1\frac{1}{8}''$.

Yo. 00184. Pottery fr., neck of vessel, ribbed, with appliqué orn. On lotus base human fig. kneeling on R. knee with hands raised together as in prayer. Flat head-dress with band and jewel in front, ear-rings, long stole, bracelets. Reddish-drab clay. Gr. M. $2\frac{1}{8}'' \times 1\frac{3}{8}''$. Pl. I.

Yo. 00185. Terra-cotta appliqué, cast of head of tiger, L. profile. Fine naturalistic work. H. 1″; length $1\frac{1}{2}$″.

Yo. 00186. Terra-cotta appliqué double leaf orn. from vase, as on Yo. 01. a. *C.* $1\frac{3}{8}$″ × $\frac{3}{4}$″.

Yo. 00187. Terra-cotta monkey, as Yo. 003. q, 00191. Stump of R. arm raised; other limbs and head gone. $\frac{11}{16}$″ × $\frac{1}{2}$″.

Yo. 00188. Terra-cotta miniature jug, neck and spout of; as Yo. 0039. d. Hard red clay. H. *c.* $\frac{3}{8}$″; length of top to tip of spout $\frac{7}{16}$″.

Yo. 00189. Terra-cotta appliqué monkey head (modelled). Naturalistic features, but fur not marked. Holes for ears. Rude work. *C.* $\frac{1}{2}$″ × $\frac{1}{2}$″.

Yo. 00190. Terra-cotta monkey head, rudely modelled, owl-type, in light terra-cotta, somewhat defaced. Concentric rings for eyes. H. *c.* $\frac{7}{16}$″.

Yo. 00191. Terra-cotta monkey, owl-type, squatting on heels with hands clasped before him. Wears loin-cloth. Cf. Yo. 0031. c. Roughly modelled out of clay rolls; head made separately and inserted in hole in neck. H. *c.* $1\frac{1}{16}$″.

Yo. 00192. Terra-cotta fr. of R. knee of kneeling woman; as Yo. 2, q. v. H. $1\frac{1}{4}$″.

Yo. 00193. Fr. of grey sandstone. Gr. M. $\frac{3}{4}$″.

Yo. 00194. Terra-cotta appliqué from vase, upper half of Gandharvī carrying wreath. Cf. *Anc. Khotan*, Pl. XLV, Kh. 003. b. H. $1\frac{7}{8}$″; width $1\frac{3}{4}$″.

Yo. 00195. Spindle-whorl, of dark green soapstone. Plain. H. $\frac{11}{16}$″; gr. diam. $1\frac{1}{16}$″.

Yo. 00196. Triangular cone of green jade. H. $1\frac{1}{4}$″; base (longest side) $\frac{3}{4}$″.

Yo. 00197. Glass bead, long, hexagonal, of opaque green and yellow glass, worked in wavy stripes. Length $\frac{15}{32}$″; diam. $\frac{3}{8}$″.

Yo. 00198. Irregular lump of lapis lazuli. Gr. M. $\frac{1}{2}$″.

Yo. 00199. Square seal in lead. On back, small handle-socket. Intaglio design much encrusted. Horned animal standing L. Very rude work. $\frac{3}{4}$″ × $\frac{3}{4}$″ × $\frac{1}{8}$″. Pl. V.

Yo. 00200. Lead rosette, pierced in centre. Much decayed. Back plain and flat. See Yo. 00201. Diam. $\frac{3}{4}$″.

Yo. 00201. Lead rosette, similar to Yo. 00200. Large central hole. Pointed petals with central rib radiating to dot border. Back plain. Diam. $\frac{11}{16}$″. Pl. VI.

Yo. 00202. Oblong bronze seal with ring handle at back. Intaglio design of rampant horned dragon, L., highly stylized. $1\frac{1}{8}$″ × $\frac{5}{8}$″. Pl. V.

Yo. 00203. Bone chrysanthemum rosette, pierced at centre, radiating petals. Diam. $\frac{11}{16}$″.

Yo. 00204. Bone disc pierced transversely, with intaglio design. Obv. hornet to R., within bead border. Rev. similar border; within, curved lines apparently meaningless. Diam. $\frac{1}{2}$″; thickness $\frac{1}{4}$″. Pl. V.

Yo. 00205. Round garnet intaglio, convex. Hare or rabbit to L. $\frac{1}{4}$″. Pl. V.

Yo. 00206. Oblong garnet intaglio, flat. Bust, three-quarter profile of Indo-Scythian ruler. Long delicate face with small full mouth and eyes slightly aslant. On forehead a rosette of four beads in an angular setting, from which a long plain fillet falls down side of face. A heavy plait of hair frames the face. Round neck, string of pearls. Drapery, slightly puckered on shoulders, meets in straight V on breast. Cf. Scytho-Sassanian coins, and *Anc. Khotan*, Pl. XLIX, I. 001. Pl. V.

Yo. 00207. Oval seal of steatite. Back rounded and pierced transversely. Intaglio design indistinct, apparently gryphon in flight. $\frac{5}{8}$″ × $\frac{1}{4}$″ × $\frac{1}{4}$″. Pl. V.

Yo. 00208. Piece of bone, curved, cut on convex side with border pattern (row of triangles between rows of dots), intaglio. $\frac{7}{8}$″ × $\frac{7}{16}$″ × $\frac{3}{16}$″. Pl. VI.

Yo. 00209. Wine-red stone (garnet?), cut to trefoil-shape. Gr. M. $\frac{1}{4}$″.

ANTIQUES ACQUIRED AT KHOTAN TOWN

Badr. 001. Elliptical cornelian intaglio, flat. Female bust to L. hair rolled; very coarse work. Degraded example of series Khot. 0075, 0076, 0079, being barbarous reflection of some late classical original. $\frac{5}{8}$″ × $\frac{1}{2}$″. Pl. V.

Badr. 002. Elliptical garnet intaglio, plano-convex. Beardless male head, L., of the type of Alexander; drapery at neck. Hair combed from top of head and tied round with fillet, below which it makes heavy rouleau. Dot ear-ring. Features sketchy but with a certain delicacy. Cut surfaces well polished. $\frac{7}{16}$″ × $\frac{3}{8}$″. Pl. V.

Kasim. 001. Fr. of turned wooden bowl. Ring base. Diam. base $2\frac{7}{8}$″; Gr. M. 5″; thickness $\frac{5}{16}$″.

Khot. 01. a. Terra-cotta monkey, upper part of, naturalistic type. Arms lost. H. $1\frac{1}{4}$″.

Khot. 01. b. Terra-cotta monkey, upper part (from waist) of, playing guitar. H. 1″.

Khot. 01. c. Terra-cotta monkey, with pigtail (owl type), seated on ground. Legs and arms lost. H. $\frac{15}{16}$″.

Khot. 01. d. Terra-cotta monkey, upper part of, playing on syrinx. H. $\frac{5}{8}$″.

Khot. 01. e. Terra-cotta monkey, upper part of, owl type. Hands clasped flat across chest. H. $\frac{1}{2}$″.

Khot. 01. f. Two terra-cotta monkeys, owl type, squatting on low seat; L. hands raised to mouths. H. $1\frac{1}{4}''$.

Khot. 01. g. Terra-cotta male head, front cast of. Bald forehead, narrow eyes, long thin moustache, arched eyebrows. Closely resembles Yo. 009. a. H. $1\frac{1}{4}''$.

Khot. 01. h. Terra-cotta male head, front cast of. Same features as Khot. 01. g, but flatter and broader; eyebrows rendered by raised ridges instead of by incision. H. $1\frac{1}{2}''$.

Khot. 01. i–k. Three terra-cotta female heads belonging to the same series as Yo. 009, 0041; probably from same set of moulds. *Khot. 01. i.* Hair descends in point over forehead and curls forward towards mouth. Round topknot; short upper pigtail over cushion, and traces of lower pigtail turned up. Eyes very prominent. Nostrils and mouth-corners drilled. Cf. Yo. 009. h. 2. H. $2\frac{3}{16}''$. *Khot. 01. j.* Hair brushed straight over forehead and in front of ears. Eyes narrow and slightly sloped, incised. Corners of mouth drilled. Contours delicately modelled. Cf. Yo. 0041. e. H. $1\frac{7}{8}''$. *Khot. 01. k.* Hair parted in middle, brushed straight up from forehead, where held in place by comb with palmette points and tasselled ends. Small pigtail doubled back over ingot-shaped cushion; main pigtail upturned. Eyes prominent, features rough. Round neck a twisted necklace fastened by knob behind. Cf. Yo. 009. d. i (larger scale). H. $1\frac{5}{8}''$.

Khot. 01. l. Terra-cotta grotesque female fig. Hair dressed in conical coiffure with long pigtail; large ears; collar (as Khot. 01. k) supporting circular jewel in front; body naked; belt with jewels, the ends hanging down by R. side, and short kilt-like skirt. Arms and legs broken away. H. $2\frac{3}{8}''$.

Khot. 01. m. Terra-cotta fr. of vase with appliqué fig. of Gandharvī. Brows bound with broad rope-like tiara. Lower part lost. Hands lifted, holding beaded festoon across body. Cf. Yo. 0018. H. $1\frac{9}{16}''$.

Khot. 01. n–q. Four terra-cotta appliqué masks of grotesque human type, forming part of the same series as Yo. 001, q. v.; prob. from same set of moulds, in spite of differences in attached details. *Khot. 01. n.* Closely resembling Yo. 001. r. Prominent eyes, corners of mouth turned up and open, with dots inside. H. $1\frac{3}{16}''$. *Khot. 01. o.* Much defaced. H. $1\frac{3}{8}''$. *Khot. 01. p.* Closely resembling Yo. 001. u. Corners of mouth downturned: vertical line down forehead. H. $1\frac{1}{4}''$. *Khot. 01. q.* Small and rough. H. $\frac{15}{16}''$.

Khot. 01. r. Terra-cotta appliqué lion-mask fringed with conventional curls. Moustache of moderate size. The whole of irregular shield-shape. H. $2\frac{1}{8}''$.

Khot. 01. s. Terra-cotta fr. of vessel, orn. with horizontal flutings and circular lion-head mask of debased type. $1\frac{7}{8}'' \times 1\frac{3}{8}''$.

Khot. 01. t. Terra-cotta female monkey, naturalistic type; nude, kneeling on R. knee; L. leg bent at knee supports L. elbow, L. hand being raised to temple. Fine miniature work. H. $\frac{11}{16}''$.

Khot. 01. u. Iron arrowhead. Three barbs, short solid haft. Section triangular with concave sides, differing from T. XIX. i. 005. Length $1\frac{3}{4}''$.

Khot. 01. v. Round bronze seal, with shank pierced for suspension as Yo. 00142, etc. Device, antlered deer, very rude. Diam. $\frac{1}{2}$ to $\frac{9}{16}''$. Pl. V.

Khot. 01. w. Flat circular bronze orn. Face adorned with raised lines radiating from centre. Condition poor. Average diam. $\frac{5}{8}''$.

Khot. 01. x. Rectangular lump of lead (?), with covering of bronze. A weight. $\frac{7}{16}''$ sq. $\times \frac{1}{4}''$.

Khot. 01. aa. Bronze fr. of rim of mirror, with raised pattern of interlacing arches between two bands. Length $1\frac{9}{16}''$.

Khot. 02. c. Round bronze button, with large shank behind. On face are raised edges to form setting of inlay, as on Khot. 0020. Inlays all lost, and part of setting. When complete would have formed flower with eight pointed petals, and scalloped border connecting the points. Two scallops between each petal and next. Diam. $1\frac{3}{8}''$. Pl. VII.

Khot. 02. d. Octagonal bronze button or seal, with shank at back. On face design of four-petalled flower. Condition bad. Prob. an ink seal. Diam. $\frac{7}{8}''$.

Khot. 02. e. Octagonal bronze seal, with shank at back, prob. an ink seal. Design, cruciform flower, the tips of petals in-curled. Rough work; poor condition. Diam. $\frac{3}{4}''$. Pl. V.

Khot. 02. f. Sq. stone seal, as Yo. 00159, etc. Tendril-like design on basis of Svastika with spur on each arm. H. $\frac{9}{16}''$; base $\frac{1}{2}''$ sq. Pl. V.

Khot. 02. g. Small bronze object, shaped like washer. Ring with cruciform arms. Use uncertain. Diam. outside of ring $\frac{1}{2}''$; arm to arm (diagonally), $\frac{13}{16}''$.

Khot. 02. h. Bronze Buddha fig. Solid casting; seated cross-legged with hands in lap. Elongated ears and topknot. From under feet runs down long tongue of bronze, which originally filled passage in mould and was meant to be broken off. Same may apply to projection in middle of back, due to air-hole of mould. Condition bad, H. $1\frac{5}{16}''$; length of tongue, $1\frac{9}{16}''$. Pl. VII.

Khot. 02. j. Roughly elliptical lump of bronze with flat bottom. Condition bad. Use (?). H. $\frac{3}{8}''$; length $1\frac{1}{16}''$; gr. width $\frac{11}{16}''$.

Khot. 02. k. Bronze arrowhead. Type of Khot. 01. u. Length $1\frac{1}{8}''$.

Khot. 02. l. Fr. of bronze orn., much corroded. Design indistinguishable. $1'' \times \frac{3}{4}''$.

Khot. 02. m. Bronze appliqué orn. in shape of low fivefold 'plume'. Stud through centre for attachment. Surface flat. Condition fair. H. $\frac{5}{8}$" ; width $\frac{25}{32}$".

Khot. 02. n. Bronze stud with circular head. Diam. of head $\frac{9}{16}$" to $\frac{11}{16}$" ; length $\frac{1}{4}$".

Khot. 02. o. Grotesque fig. of man in dark grey slate-stone. Nude except for girdle round hips, necklace, bracelets, and large circular ear-rings which rest upon shoulders. Fig. very broad and flat. Arms bent at elbow (L. broken off just below); in R. hand a small bag (?). Legs apart, R. broken off at mid-thigh. Short pigtail at nape of neck. Head flat on top and sloping up to back, where it turns down again at a sharp angle. Practically no forehead. Fine work. Encrusted in parts. H. $1\frac{3}{4}$". Pl. VI.

Khot. 02. p. Terra-cotta fig. of squatting monkey, owl-type. Wears loin-cloth, on which it lays L. hand. R. hand on mouth. H. *c.* $\frac{7}{16}$".

Khot. 02. q. Part of light red cornelian (?) bead, treated in same curious manner as Yo. 00125, with intersecting bands of white and white dots. Here black appears also in middle of white. Cf. also Khot. 02. r. H. $\frac{9}{16}$". Pl. IV.

Khot. 02. r. Flat square bead agate, dark brown and greyish-white, pierced diagonally. Surface on both sides treated with white in manner of Yo. 00125 and Khot. 02. q, q. v. Pattern, 2 squares (in outline), one inside the other, and within, a 'Maltese cross' (also in outline). $\frac{5}{8}$" × $\frac{9}{16}$" ; thickness *c.* $\frac{3}{16}$". Pl. IV.

Khot. 04. b. Disc of dark green malachite. One surface slightly sunk. In its centre a shank has been formed by boring two slanting holes to meet each other. This has broken, however, and another has been made just within the raised outer edge. Diam. $1\frac{1}{8}$" ; thickness, *c.* $\frac{3}{16}$".

Khot. 04. c. Sq. bronze seal with shank at back, as Yo. 00141, etc. Condition bad. Design, two birds standing facing each other, with uplifted wings. Indistinguishable object beneath feet. Over head horned disc (?). *c.* $\frac{3}{4}$" sq. Pl. V.

Khot. 04. d. Miniature bone comb. Broken off just below beginning of teeth. Grooves and concentric circles, as on Yo. 00162. Round top with projection having hole for suspension. H. (broken) $\frac{3}{4}$" ; length *c.* $\frac{3}{4}$". Pl. VI.

Khot. 04. e. White soapstone relief fr., as Yo. 00138. Lower edge curved, with chevron orn. ; R. side straight, others broken. Relief represents kneeling female fig. with arms upraised from elbows, holding in R. hand a bunch of flowers. Wears long full skirt, head-dress, scarf, bracelets. Long tresses hang down sides of face. 1" × $\frac{3}{4}$". Pl. VI.

Khot. 04. f. Seated bird in white jade, upper part of. Sides cut flat and hole pierced horizontally. Very rude work and no detail. H. $\frac{15}{32}$" ; length *c.* $\frac{9}{16}$". Pl. VI.

Khot. 04. g. Short bar of soapstone, yellowish-white, with piece projecting at right angles at base. Broken off larger object (?). $\frac{1}{2}$" × $\frac{1}{2}$".

Khot. 04. h. Elliptical garnet intaglio. Female bust to L. The hair parted in middle and drawn back to bunch behind in the manner of the Younger Faustina. Rude work, being little more than a succession of scarcely modified drill-holes ; only the profile fairly carefully worked. Cf. Khot. 0075, 0076, 0079, and *Anc. Khotan*, Pl. XLIX, B. D. 001. c. $\frac{7}{16}$" × $\frac{5}{16}$". Pl. V.

Khot. 04. j. Circular garnet intaglio, convex. Female fig. seated in profile to L. on rock (?). Small head, long queue of hair. Body heavy, with drapery to ankles. Arms advanced, R. raised, L. slightly lowered. Coarse work, almost entirely drilled. Diam. $\frac{3}{8}$". Pl. V.

Khot. 04. k. Elliptical lapis lazuli intaglio. Design of scorpion. Poor work. $\frac{11}{32}$" × $\frac{5}{16}$". Pl. V.

Khot. 04. l. Circular garnet intaglio, lower half of, plano-convex. Design remaining shows stem and two out-curling leaves of acanthus type. Good work. $\frac{1}{4}$" (broken) × $\frac{3}{8}$". Pl. V.

Khot. 04. m. Rhombus-shaped garnet intaglio. Rudely cut design of bird in profile, R., one wing showing above body, one below. $\frac{3}{8}$" × $\frac{1}{4}$". Pl. V.

Khot. 06. a. Terra-cotta male head, type of Khot. 01. h, q. v., showing tonsured crown. Hair indicated by incisions set 'herring-bone' fashion. Narrow eyes, long thin moustache ; beard along edge of jaw. H. 2".

Khot. 06. b. Terra-cotta appliqué lion-mask, crude. Mouth open shows tongue and teeth. Eyebrows rendered by applied strips ; hair of mane by ring of saw-tooth projections. Diam. $1\frac{5}{16}$".

Khot. 06. c. Terra-cotta monkey, upper part of; naturalistic type. L. hand laid on R. side of face. H. $\frac{7}{8}$".

Khot. 06. d. Terra-cotta head of monkey, owl-type, with broad pigtail falling down back of head. H. $\frac{1}{2}$".

Khot. 06. e. Terra-cotta monkey's head, as Khot. 06. d, but larger size. No pigtail. H. $\frac{5}{8}$".

Khot. 06. f. Terra-cotta monkey, upper part of; owl-type. Hands raised and clasped in front of face as in prayer. H. $\frac{11}{16}$".

Khot. 06. g. Terra-cotta miniature monkey, upper part of; naturalistic type; attitude as Khot. 06. f. H. $\frac{7}{16}$".

Khot. 06. h. Terra-cotta hoopoe with crest, and wings meeting above back. Body pierced for suspension. Length $\frac{15}{16}$".

Khot. 06. i. Terra-cotta head of hoopoe with long beak and crest. H. $\frac{11}{16}$".

Khot. 06. j. Terra-cotta miniature vessel, oval-bodied, with round thick flat base. Handle or spout in form of bird's head and neck with wings. H. $\frac{15}{16}$".

Khot. 06. k. Terra-cotta fr. L. knee of seated Buddha. $1\frac{5}{16}'' \times c.\ \frac{3}{4}''$.

Khot. 06. n. Round bronze seal, with long shank behind as Yo. 00142. Condition bad. Design seems to be diamond (in outline) with somewhat concave sides, outside each of which is round dot. H. with shank $1\frac{1}{16}''$; diam. base $\frac{5}{8}''$ to $\frac{11}{16}''$.

Khot. 06. o. Bronze seal, much corroded, and having now face only, without handle. Contains apparently a single Chin. char. too blurred to be determined (L. C. Hopkins). $\frac{5}{8}'' \times \frac{1}{2}''$.

Khot. 06. p. Oblong seal of grey stone, shaped like flat four-sided pyramid, with shank at apex. On base, linear design within single border, almost indistinguishable. H. $\frac{3}{8}''$; base $\frac{3}{4}'' \times \frac{9}{16}''$.

Khot. 06. q. Pear-shaped bronze seal, with 'shoulders' well indented. Prob. for ink impressions. Design: plain border with inner plain border separated from it by sunk line. Within, a trefoil with groove down middle. Shank broken off. H. $\frac{23}{32}''$; width $\frac{17}{32}''$.

Khot. 06. r. Round bronze seal, with shank at back as Yo. 00144. Very fine design of gryphon with lashing tail, uplifted head, and open jaws. Border of single circle, concentric with outer edge and joined to it by series of cross-lines. Diam. $\frac{11}{16}''$. Pl. v.

Khot. 06. s. Sq.-faced lignite seal, with hole through centre. Remains of shank at back. Design as on Yo. 00150, of floriate Svastika. Face $\frac{5}{8}'' \times \frac{11}{16}''$; thickness $\frac{1}{4}''$. Pl. v.

Khot. 003. Bronze arrowhead. Three barbs, triangular section. Type of T. xii. 0020. Stump of iron shaft in socket. Length $1\frac{1}{2}''$.

Khot. 004. a. Elliptical garnet intaglio, flat. Winged bull standing L., with human head, bearded, and wearing a diadem from which rises a feather (?) plume. Early Persian type, good cutting, *c.* fourth cent. A.D. In front are five, and over the back three, characters in Pahlavi read by Dr. Barnett as *Apastān 'al-yezdān*. $\frac{1}{2} \times \frac{3}{8}''$. Pl. v.

Khot. 004. b. Elliptical garnet intaglio, convex. Female (?) bust L. Long neck, straight profile. Hair brushed up to form small crest over forehead, and falling in mass behind. Coarsely ground work. $\frac{1}{2} \times \frac{3}{8}''$. Pl. v.

Khot. 004. c. Elliptical cornelian intaglio, flat. A porcupine lying to L. Very rude shallow work. $\frac{3}{8}'' \times \frac{5}{16}''$. Pl. v.

Khot. 005. Bronze squat fig. of man, cast solid. Hands clasped before body, elbows out. Space between arm and body on each side pierced for suspension. Condition fair. H. $\frac{23}{32}''$. Pl. vi.

Khot. 006. Green steatite fig. on oblong base, a grotesque beast couchant. Long neck curved backwards in swan-like attitude with chin resting upon it. Head and upright ears not unlike those of horse or goat. From forehead spring two long curving horns which sweep out backwards and downwards behind head, then curve forwards again and end in spiral on shoulders. Tail curls upwards over back in S-shape, touching downward sweep of horns. Surface somewhat defaced. Along middle of base, a slit cut up into interior, allowing fig. to be stuck upon some shaft as finial. H. $1\frac{5}{8}''$; base $1\frac{3}{16}'' \times c.\ \frac{7}{16}''$. Pl. vi.

Khot. 007. Crescent-shaped bronze orn.; cf. Yo. 00176, q. v. Shank for suspension behind. Projection in middle of concave side, narrow at base and widening towards end, which is in line with tips of crescent. Within edge is border of sunk line running all round. Field orn. with conventional plant (?) design. Condition good. $1\frac{11}{16}'' \times 1\frac{1}{4}''$.

Khot. 008. Bronze cast of Bactrian camel, standing on elliptical base. Lower side of body cut upwards almost to base of second hump, leaving unnaturally attenuated waist. One side smooth and polished, the other roughened with exposure. No detail. On bottom of base a roughly cut seal design representing a grotesque beast with horned head, long neck and long snake-like body which turns upwards sharply at end of ellipse. Fore- and hind-legs shown. For animal of somewhat similar kind, see *Anc. Khotan*, Pl. L, N. 006. H. $1\frac{3}{8}''$; base $\frac{7}{8}'' \times \frac{1}{2}''$. Pl. vi.

Khot. 009. Bronze Buddha head, cast solid. Oblique eyes, elongated ears, topknot. Much defaced and cracked. H. $1\frac{1}{8}''$. Pl. vii.

Khot. 0010. Terra-cotta figurine of monkey, naturalistic type, kneeling on plain flat stand. Wears loin-cloth, but phallic; holds water-skin under L. arm; R. hand broken. Good work. H. $2\frac{1}{4}''$.

Khot. 0011. Terra-cotta figurine of monkey, kneeling, phallic; R. hand laid on breast. On back is hump-like object, orn. above with incised circles, on sides with hatching. H. $1\frac{11}{16}''$.

Khot. 0012. Terra-cotta head of Buddha, front cast of. Hair and topknot left in mass. Much weathered. H. $1\frac{9}{16}''$.

Khot. 0013. Terra-cotta fr. of female fig., lower part (from waist); as Khot. 01. l. From belt hang fur tails or ornaments. Legs are sq. columnar mass with vertical groove back and front. H. $1\frac{1}{2}''$.

Khot. 0014. Terra-cotta model of water-skin, showing by incised lines sewn-up seams of original. Length $1\frac{7}{16}''$.

Khot. 0015. Terra-cotta seated monkey, owl type. Body long and funnel-shaped; legs and arms broken off short. H. $1\frac{1}{16}''$.

Khot. 0016. Pottery fr. of small vessel of fine red ware, orn. above by chain pattern formed of interlinking semicircles, below by incised fluting connected at top by semicircles. $1'' \times 1''$.

Khot. 0017. Bronze arrowhead; three barbs, hollowed sides. Cf. Khot. 01. u. Length $1\frac{5}{16}''$. Pl. VI.

Khot. 0018. Triangular bronze plate. Two short teeth (broken) project from base. Hole pierced near each corner. H. of triangle $1\frac{3}{8}''$; base $\frac{7}{8}''$.

Khot. 0019. Flat bronze disc, with remains of stud in centre one side. Nail-head (?). Average diam. $\frac{5}{8}''$; thickness $\frac{1}{32}''$.

Khot. 0020. Half of diamond-shaped bronze orn. Back flat; front shows raised setting for enamel (?), now lost. One small round piece in centre, and five or six large pieces round it as petals. Remains show setting for centre, and two petals (complete); also two more (broken); and additional small round setting in apex of diamond. Gr. length (broken) $1''$; gr. width (broken), *c.* $\frac{3}{4}''$. Pl. VI.

Khot. 0021. Fr. of opaque black glass bead, inlaid with curving lines of white. Diam. $\frac{1}{2}''$.

Khot. 0022. Terra-cotta human head, front cast of. Head-dress of uncertain form. Burnt since firing and almost fused. Rough work. Traces of fused green colour. H. $\frac{15}{16}''$. Pl. VI.

Khot. 0023. Terra-cotta monkey, upper part of, naturalistic type. R. hand is laid on breast beneath throat; L. arm and all beneath breast lost. H. $1\frac{5}{8}''$.

Khot. 0024. Lead ring, round in section. Cut through at one place. Diam. outside $\frac{3}{4}''$ to $\frac{13}{16}''$; inside $\frac{9}{16}''$ to $\frac{5}{8}''$.

Khot. 0025. Bronze finial orn. Ornamental rod, details of which now indistinguishable. At centre, six-petalled flower. Below shaft a round tang. Other end pierced, showing remains of transverse pin. H. $1\frac{3}{4}''$. Width of flower $\frac{1}{2}''$. Pl. VI.

Khot. 0036. Terra-cotta fr., human head of Buddha type. Features well marked and preserved. Hair (moulded separately) missing. H. $2\frac{1}{8}''$.

Khot. 0037. Bronze orn., resembling Khot. 007 and Yo. 00176. But here, along convex side of crescent, lies a more or less oblong piece turning out and forking at ends. Crescent orn. with lines and circles; oblong piece with short vertical lines. H. $1\frac{5}{16}''$; gr. width $1\frac{1}{4}''$.

Khot. 0038. Bronze nail-head, corroded. Nail broken off. Diam. $\frac{5}{8}'' \times \frac{3}{4}''$; thickness *c.* $\frac{1}{32}''$.

Khot. 0039. Bronze flat circular head, hollow, of stud with two teeth. Stump of one remains. H. $\frac{1}{8}''$; diam., base $\frac{1}{2}''$.

Khot. 0040. Dome-shaped piece of bronze, diam. *c.* $1''$, standing with four legs on rectangular base with hole in middle. Somewhat corroded. Perhaps some kind of mace-head, or large button. H. $\frac{9}{16}''$; base $\frac{11}{16}''$ sq.

Khot. 0041. Part of bronze orn. (?), too fragmentary to be intelligible. $1\frac{3}{16}'' \times \frac{5}{16}'' \times \frac{1}{4}''$.

Khot. 0042. Soapstone seal, high, four-sided, of lemon-yellow soapstone. On oblong base, a roughly cut 'St. Andrew's' cross type of Svastika. Sides taper towards top (broken off just above suspension hole), and are orn. with three grooves running round horizontally. H. $\frac{7}{8}''$; base *c.* $\frac{1}{2}'' \times \frac{7}{16}''$.

Khot. 0043. Flat oblong stone seal, with shank behind. Rudely cut device (in outline) of hoopoe, with head turned back over shoulder; or perhaps head erect and long stick in beak. H. $\frac{9}{32}''$; base, *c.* $\frac{3}{4}'' \times \frac{1}{2}''$.

Khot. 0044. Glass bead, half of, round honey-coloured. Diam. *c.* $\frac{9}{16}''$.

Khot. 0046. Bronze spoon, bowl and part of handle of. Bowl oval and shallow. Sand-encrusted but well preserved. Bowl $1\frac{9}{16}'' \times 1\frac{3}{16}''$; handle, length *c.* $\frac{3}{8}''$. Pl. VII.

Khot. 0047. Bronze arrowhead. Triangular section; type of T. XII. 0020, with stump of iron shaft (corroded) in socket. Length $1\frac{3}{16}''$.

Khot. 0048. Bronze arrowhead (corroded) as Khot. 01. u and 0017. Length $1\frac{11}{16}''$.

Khot. 0049. Fr. of bronze. Corroded and indistinguishable. $1\frac{5}{16}'' \times \frac{7}{16}''$.

Khot. 0050. Bronze buckle with iron tongue. Length $1''$; breadth $\frac{15}{16}''$. Pl. VI.

Khot. 0051. Bronze ring, flat in section. Diam. outside $\frac{7}{8}''$; inside $\frac{13}{16}''$; thickness $\frac{1}{8}''$.

Khot. 0052. Bronze ring, round in section, corroded, broken through in one place. Diam. outside *c.* $\frac{3}{4}''$; thickness $\frac{1}{16}''$ to $\frac{3}{32}''$.

Khot. 0053. Bronze ring, sq., flat, like small Chinese coin. Outside $\frac{3}{8}'' \times$ *c.* $\frac{5}{16}''$; inside $\frac{3}{16}''$ sq.

Khot. 0054. Bronze seal, having roof-shaped handle pierced for suspension, and face $\frac{1}{2}''$ sq., containing much worn Chin. chars. now illegible (L. C. Hopkins). H. $\frac{3}{8}''$.

Khot. 0056. Piece of white steatite, flat, diamond-shaped, with hole through middle. Edges rounded off. Diamond $1\frac{13}{32}'' \times \frac{15}{16}''$; thickness $\frac{1}{8}''$; diam. of hole $\frac{1}{4}''$.

Khot. 0057. Lead cast of two pear-shaped fruits (?) side by side, with stalk. $\frac{5}{8}'' \times$ *c.* $\frac{3}{8}''$.

Khot. 0058. Seal of grey soapstone, four-sided, with shank at back. On base, a groove cutting field diagonally, with grooves branching from it at an angle towards two of the sides, making palm-branch pattern. H. (broken) $\frac{3}{4}''$; base was $\frac{7}{16}''$ sq.

Khot. 0059. Half of stone seal, flat, sq., with shank. Eroded; linear design now indistinguishable. Yellowish-white stone. H. $\frac{7}{16}''$; base (broken) $\frac{3}{4}'' \times \frac{7}{16}''$ to $\frac{1}{2}''$.

Khot. 0060. Pendant (?) of black paste. Small round bar, broadening and flattening towards end. At narrow end broken off where hole was pierced horizontally. Length $\frac{13}{16}''$; width $\frac{1}{8}''$ to $\frac{1}{4}''$; gr. thickness $\frac{1}{8}''$.

Khot. 0061. White jade ring, part of; semi-elliptical in section. Diam. outside was *c.* $\frac{7}{8}''$; inside *c.* $\frac{5}{8}''$; thickness $\frac{1}{8}''$.

Khot. 0062. White jade ring, fr. of; sq. in section. Diam. outside was $\frac{5}{8}''$.

Khot. 0063. Agate ring, part of; semi-elliptical in section. Light reddish-yellow. Length of fr. $\frac{11}{16}''$.

Khot. 0064. Cornelian ring, fr. of; semi-elliptical in section. Length of fr. *c.* $\frac{9}{16}''$.

Khot. 0065. Half an elliptical piece of red cornelian, with bevelled edges; apparently cut for seal but never finished. $\frac{5}{16}''$ (broken) × $\frac{1}{2}''$.

Khot. 0066. Hexagonal red cornelian bead, with hole pierced half-way through. Perhaps head of pin. Traces of gold in small depression at top. Sides bevelled from middle to top and bottom. Diam. $\frac{1}{4}''$.

Khot. 0067. Irregular fr. of red cornelian, with two rounded surfaces. Length *c.* $\frac{5}{16}''$.

Khot. 0068. Flat-sided mother-of-pearl bead, half of. Side $\frac{7}{32}''$ sq.; thickness (half of complete), $\frac{1}{16}''$.

Khot. 0069. Round bead of black glass, half of; opaque. Round middle is inlet zigzag line of white, and round ends two and three lines, respectively, of same. Cf. Yo. 00114. H. $\frac{13}{32}''$; diam. $\frac{1}{2}''$. Pl. IV.

Khot. 0070. Bead of black glass paste, half of. Round each end, in place of white lines, are inlet two yellow lines which run into each other most of the way. Cf. Khot. 0069. H. $\frac{3}{8}''$; diam. $\frac{13}{32}''$.

Khot. 0071. Large round cornelian bead, half of; chipped. H. $\frac{5}{8}''$; diam. was $\frac{11}{16}''$.

Khot. 0072. Spherical bead of millefiori mosaic glass, half of. Made up from complex hexagonal rods, flower type, each having yellow centre, red ring, and narrow petals of dark blue and light yellow alternately. Regular Western type, common in Roman Empire. Diam. $\frac{7}{16}''$. Pl. IV.

Khot. 0073. String of beads :—five red cornelian, spheroid or faceted polygonal. One black opaque glass, inlaid with lines of light blue, cylindrical. Two pink-white stone, spheroid. Two small white stone, ring. One bright blue glass, iridescent, spheroid. One black glass, iridescent ring. One white glass, iridescent spheroid. Two thin flat mother-of-pearl discs, $\frac{1}{4}''$ diam., each with five holes for attachment. Also :—One malachite bead, of irregular shape. One lighter green malachite, irregular ring. Four turquoise, irregular shape, and three small pearls.

Khot. 0075. Elliptical cornelian intaglio, flat. Beardless head L. Bust treated as in Khot. 04. h, q. v. Profile coarse, rudely drilled. Back of head smooth with swelling curve behind, divided from face by straight sharp line projecting over forehead; perhaps intended for tight-fitting cap. Double ball ear-rings. Cf. Khot. 0076, 0079. $\frac{1}{2}''$ × $\frac{15}{32}''$. Pl. V.

Khot. 0076. Elliptical cornelian intaglio, flat. Beardless bust L. For treatment, cf. Khot. 04. h; Khot. 0075 and 0079; here grotesque. Forehead and nose rendered by groove; behind in surface of seal curve of five drill-holes represents eye, nostril, lips and chin; behind this again deep round depression indicates rest of face. Hair treated in long locks radiating from crown of head and ending in round curls. Double dot ear-ring. $\frac{9}{16}''$ × *c.* $\frac{1}{2}''$. Pl. V.

Khot. 0077. Elliptical intaglio of banded chalcedony. Male bust to L. Hair brushed from top of head forms heavy bandeau over forehead to back of neck. Features straight and fine. Long pointed beard. Drop ear-ring. Bust draped. Narrow collar, below which drapery wound round shoulders and made heavy double overfall on chest. Fine miniature work of early Persian type. $\frac{5}{16}''$ × $\frac{1}{4}''$. Pl. V.

Khot. 0078. Elliptical garnet intaglio, plano-convex, edges chipped. Lion, R., meeting deer, L. Bold design, very roughly executed. $\frac{5}{8}''$ × $\frac{15}{32}''$. Pl. V.

Khot. 0079. Elliptical intaglio of banded chalcedony. Beardless bust to L. For treatment cf. Khot. 04. h, 0075, and 0076; but here still more crude. Profile, of series of dots, quite disconnected from cheek, and that again from shoulders and ear-ring. No back to head and no neck. Hair done in mass above head, treated with rows of drill-holes. Drop ear-ring. $\frac{3}{8}''$ × $\frac{5}{16}''$. Pl. V.

Khot. 0080. Lower half of elliptical garnet intaglio, plano-convex. Female bust L., up to mouth. Drapery over shoulders; lock of hair at back. Fine work in classical style. Surface in cuttings highly polished. $\frac{3}{8}''$ × $\frac{1}{4}''$. Pl. V.

Khot. 0081. Elliptical agate intaglio, yellow veined with black; flat. Lion, walking to L. Rough work. $\frac{13}{32}''$ × $\frac{11}{32}''$. Pl. V.

Khot. 0082. Elliptical intaglio of banded chalcedony, flat. Lion standing to L. $\frac{9}{32}''$ × $\frac{1}{4}''$. Pl. V.

Khot. 0083. Pottery handle, in form of grotesque winged horse, as Yo. 0015. f, type *b*. Length $4\frac{7}{8}''$.

Khot. 0085. Elliptical onyx intaglio, flat, bevelled edges. Design :—Central stem, bearing half-way up a circle, and at top a crescent. On each side, at base, a leaf curling outwards; and a cross-band binding stem and leaves together. In space above leaves, on one side a crescent, on other a star. $\frac{3}{8}''$ × $\frac{11}{32}''$. Pl. V.

Khot. 0086. Elliptical cornelian intaglio, flat. Roughly scratched work. Lion galloping to L. Coarse. $\frac{7}{16}''$ × $\frac{3}{8}''$. Pl. V.

Khot. 0087. Round garnet intaglio, plano-convex. Head and fore-part of wolf (?), with jaws open, galloping to L. Very rude work. Diam. $\frac{1}{4}''$. Pl. V.

Khot. 0088. Elliptical garnet intaglio, plano-convex. Monkey of naturalistic type squatting on haunches to L., playing on long single pipe which he holds with both

hands. Hair of head and body marked by incisions. Before him a very small fig. dancing with uplifted arms, facing R. In field five Brahmi letters read by Dr. L. D. Barnett *śrī-ṣaya.* $\frac{1}{2}'' \times \frac{7}{16}''$. Pl. V.

Khot. 0089. Fr. of pottery, trimmed and pierced for modern suspension; orn. with appliqué fig., to waist, of man. Wears heavy turban, cross-belts, and bracelets on L. upper arm. Supports drum of hour-glass shape with L. hand, beats it with R. $2\frac{5}{16}'' \times 1\frac{5}{16}''$.

Khot. 0090. Round intaglio of banded chalcedony, convex. Bearded male bust to L. of Sassanian type; head surmounted by pair of stag's horns, amulet between them. Hair behind in thick close curls. In front letters resembling Sogdian (?). Diam. $\frac{5}{8}''$. Pl. V.

Khot. 0091. Round onyx intaglio, flat. Youthful male head in profile to L.; features of late classical type. Wears gorget, bead ear-ring, and composite helmet consisting of (*a*) in front, male mask with sharp nose and pointed beard, Persian type; (*b*) behind, elephant's head with tusk and curled trunk. The human mask faces upwards, the elephant's looks backwards and shields back of head. Fine detailed work, with some polish in cutting. For similar type of helmet, cf. *Anc. Khotan*, Pl. XLIX, B. D. 001. j. Diam. $\frac{1}{2}''$. Pl. V.

Khot. 0092. Fr. of oval garnet intaglio, convex. Beardless male head to L.; the hair indicated by vertical lines; a roll of hair above the forehead. Bust broken away. Poor work, showing classical influence; good polish in cuttings. $\frac{5}{8}'' \times \frac{3}{8}''$. Pl. V.

Khot. 0093. Circular garnet intaglio, plano-convex. Winged ox with head lowered, to L. End of wing curled; horn reaches to root of wing; head being somewhat turned round towards front. Rough but vigorous work; fine polish in cuttings. Diam. $\frac{1}{2}''$. Pl. V.

Khot. 0094. Circular cornelian intaglio, flat, with bevelled edges. An ibex, walking to L. Diam. $\frac{3}{8}''$. Pl. V.

Khot. 0095. Elliptical intaglio of banded chalcedony, flat. Lion walking to L. Fairly good work. Eastern type. $\frac{3}{8}'' \times \frac{5}{16}''$. Pl. V.

Khot. 0096. Elliptical intaglio of banded chalcedony, flat. Head of animal to L., ears prominent. Rough drilled work. $\frac{1}{4}'' \times \frac{3}{16}''$. Pl. V.

Khot. 0099. Wooden fr., split off larger piece, showing fig. of man in primitive relief carving. Body a mere cylinder and limbs sticks. Hands placed on front of body, L. on abdomen, R. over pudenda; feet hang down from ankles instead of coming forward, owing to difficulties of fore-shortening. Eyes and mouth rendered by holes, fingers and toes by grooves. Grooves also cut across L. wrist and ankles to indicate bangles. Hair and ears not marked. Prob. a votive fig. to promote fertility. Length of fr. 8"; width $1\frac{3}{4}''$; length of fig. 6".

Khot. 00100. Pottery handle of large wheel-made vessel of fine red clay. Base stood upon shoulder. From this the handle (elliptical in section) ran up, straight but inclining outwards, for about 4"; then curves suddenly in. At this end remains part of vessel showing widely everted rim. The straight line of handle is continued upwards by classical double anthemion orn., which meets edge of rim at its tip. Length $6\frac{3}{8}''$; width of handle $1\frac{1}{4}''$.

Khot. 00101. Body of pottery vessel, wheel-made, with flat bottom; widest circumference round middle. Had slender neck now broken off, edge smoothed, and prob. a single handle, resembling Khot. 00102, when complete. On shoulder slope is one lion mask appliqué, which apparently was added when handle broke, and covers mark of its base. Beneath this two incised lines run round pot. H. $5\frac{3}{4}''$; h. to start of shoulder 3"; diam. at base $2\frac{9}{16}''$; gr. diam. $4\frac{1}{2}''$.

Khot. 00102. Hand-made pottery jug with single handle, resembling Greek oenochoë. Flat bottom; walls very slightly curved outwards; long shoulder; short straight neck, into middle of which joins top of handle. No orn. Red clay. H. 9"; h. to neck $6\frac{7}{8}''$; diam. of base $2\frac{7}{8}''$; gr. diam. $4\frac{3}{4}''$. Pl. IV.

Tam. 001. Clay mould in two halves, for making solid-cast metal fig. of deer lying down. Large back-curving horns, furry ears, eye, hoofs, etc., well marked. The two halves do not fit very well. Said to have been found at Tam-öghil as all Tam. 002-005. H. of animal $1\frac{3}{16}''$; mould length 3"; mould width $1\frac{9}{16}''$.

Tam. 002. Clay mould, in two halves, for making fig. similar to that of Tam. 001. The two halves furnished with flanges to give better fit. *C.* $3'' \times 1\frac{9}{16}''$.

Tam. 003. Half of sq. clay mould for making bronze button, as Yo. 00146. I.e. plain sq. with sunk border wherein dots in relief. Impression $1\frac{1}{16}''$ sq.; mould $1\frac{3}{4}''$ sq.

Tam. 004. As Tam. 003, but not belonging to same mould. Mould $1\frac{11}{16}''$ sq.; impression *c.* $1\frac{1}{8}''$ sq.

Tam. 005. Stucco relief fr. Straight band, semicircular in section, orn. with spiral lines of bead orn. alternating with plain fillet. $3\frac{1}{4}'' \times 1\frac{3}{16}'' \times$ (gr. thickness) $\frac{3}{8}''$.

Jiya. 003. Jade bird, cut out of very dark green jade. Pierced transversely through shapeless feet. No eyes. Wings folded, indicated by channelled curve on each side. Said, like Jiya. 004–007, to have been found at 'Tatis', N. of Jiya. $1\frac{1}{8}'' \times \frac{1}{2}'' \times \frac{1}{4}''$. Pl. VI.

Jiya. 004. Stone charm, prob. meant to represent small bag containing three objects, expressed by three lobes, of which the central projecting one has part split away. Upper part carved, to suggest perhaps rucks in the neck of bag caused by contraction of drawing-string. Hole drilled through projecting lug at top for suspension. Back, flat and unmodelled. Material seems to be hard dark grey sandstone. $\frac{5}{8}'' \times \frac{3}{8}''$. Pl. IV.

Jiya. 005. Quarter of lentoid bead of cornelian, decorated artificially with lozenge pattern of white lines; cf. Yo. 00125. $\frac{3}{4}'' \times \frac{3}{8}''$ to $\frac{3}{16}'' \times \frac{1}{4}''$ to $\frac{1}{8}''$. Pl. IV.

Jiya. 006. Conical sardonyx, with horizontal markings. Apex cut flat. Pierced horizontally. $\frac{1}{2}'' \times \frac{1}{2}'' \times \frac{1}{4}''$.

Jiya. 007. Sq. bronze seal; pierced tongue at back broken. Square divided into quarters with intaglio design in each. Only clear designs, Svastika, and maze. $\frac{13}{16}'' \times \frac{1}{16}''$. Pl. VI.

Section IV.—DESERT SITES TO THE NORTH OF JIYA

Already in August, on my first arrival in Khotan, I had taken care to send out small parties of local 'treasure-seekers', quaint men familiar to Badruddīn Khān, to search in the desert north-eastwards for likely sites to explore. On my return from the mountains they duly turned up with such specimens of antiques as they had been able to pick up on the surface near structural remains of different 'Tatis', or had secured from others who had on previous occasions tried their luck by digging. The indications I extracted from them, not without trouble, as to the exact direction, distances, etc., of the different sites thus authenticated enabled me in the light of former local experience to prepare rapidly a programme for my immediate explorations. *Search by 'treasure seekers'.*

So after a halt of five days necessitated by manifold practical preparations I was able to set out from Khotan by September 15. My first object was to revisit the large and interesting ruin of Rawak, the scene of my last excavations in 1901, partly in order to ascertain what change had since taken place in the condition of the surrounding dunes, and partly for the sake of inspecting some remains newly reported in that neighbourhood.

After a march of about eleven miles mainly through the fertile canton of Jiya the desert was entered a little beyond the village of Suya (see map, No. 27). At the latter a large grove of Toghraks or wild poplars of considerable age clustering around a Mazār showed that cultivation had reconquered here an area once abandoned to the desert. Then we followed a bare gravel 'Sai', clearly marked by high dunes on either side as an ancient bed of the Yurung-kāsh and still known as *Kōne-daryā*, until nightfall obliged us to halt near the brackish well called *Nāche-kuduk.* Striking off to the north next morning and crossing for some six miles a belt of steadily rising dunes, I sighted once more the white brick pile of the ruined Stūpa of Rawak. *March to Rawak Stūpa.*

My excavations of April, 1901, fully described in my former Report, had brought to light a mass of interesting sculptures in the court of this imposing ruin.[1] With all details of its surroundings still clearly impressed in my memory, the change which had since taken place here could not fail to strike me at the first glance. The high dunes which then covered parts of the longer, north-east and south-west, sides of the quadrangular Stūpa court,[2] had moved on considerably farther south-east. The crest of the dune, over twenty feet in height, which then just rose along the north-east enclosing wall, had extended to within about thirty-seven feet of the south corner of the court. The dune overlying the south-west wall had similarly advanced and left barely ten feet of the latter still traceable above the sand. What little there emerged of the south-east face was enough to show me the destruction which had been dealt here by the hand of man since 1901. The wall, which I had found lined with a continuous row of stucco relievo figures mostly colossal, now displayed bare brick-work. A large party of Chinese jade-diggers from Kumat, near Tam-ōghil, was said to have come here some time after my first visit to try their luck at seeking for 'treasure'. Attacking the then accessible part of the south-eastern enclosing wall they had completely stripped it of its friable stucco images. My care in burying these again under sand, just as I had found them, had proved in vain, *Changes of dunes at Rawak.*

[1] Cf. for my work at Rawak, *Ancient Khotan*, i. pp. 482–503.

[2] See *ibid.*, ii. Pl. XL.

and of the interesting specimens of Khotan sculptural art then unearthed, all that survives now, I fear, are my photographs.[3] With this evidence of rapid destruction before me, I felt glad that the movement of the dunes just indicated meant increased protection for whatever sculptural work may lie buried under sand on the other sides of the Vihāra court.

Plan of Stūpa verified.

This movement had changed also the aspect of the Stūpa itself. Five years before its imposing base of three stories had been almost entirely covered by drift sand except to the south-east. Now its upper portion, with most of the second story, emerged free on all sides (see Fig. 36). Thus the previous delineation of the ground-plan of the base, with its strongly marked cross-like projections bearing the four flights of stairs, could now be fully verified.[4] On the newly exposed parts of the base more burrowings, evidently of old date, had become visible. The height of sand filling the Stūpa court made a complete clearing of the latter now quite as impracticable, without a disproportionate expenditure of time and money, as before. But by a small excavation at the salient angle next on the south to the north-eastern flight of stairs it became possible to secure the section of the elaborate mouldings which the lowest base shows near its top and foot. On the other hand, the change of the sand conditions obliged me to renounce the hope of clearing the sculptures which probably still exist intact along the north-west wall of the Stūpa court; for whereas the top of this was in 1901 just traceable above the sand, a big dune now completely covered it.

As another illustration of the change in the dunes I may mention that the relatively large patch of bare eroded ground westwards where I had camped during April, 1901, was now entirely buried beneath dunes. The exact comparison of the sand conditions with those observed more than five years before had a special interest. It distinctly supported the view, already suggested, that the high dunes about Rawak are the direct product of the fine alluvial deposit left behind by the floods of the Yurung-kāsh River and carried from its banks into the desert in the direction where the alternating east and west winds of this part of the Taklamakān have most play under local conditions.[5]

Remains south of Rawak Stūpa.

Leaving my camp at Rawak I pushed on the same day to the south-west where two of my 'treasure-seeking' guides had reported some 'Tims' and a ruined building. We had tramped for three miles up and down closely packed dunes rising up to about forty feet, with beds of reeds and some scrub in the depressions between them, when one of the men recognized the spot where he had seen some five years before a small ruined mound now hidden again by the sand. Two miles further

[3] See *Ancient Khotan*, ii. Pl. XIII–XVIII.

[4] This peculiar ground-plan of the base has acquired additional interest since I found it reproduced, though on a much smaller scale, at the ruined Stūpa *G* of the Sahri-Bahlōl site in Gandhāra; see my *Archaeol. Survey Report, Frontier Circle*, 1912, p. 16. It deserves to be specially noted that the ground-plan of Kaniṣka's famous Stūpa at Peshawar, excavated by Dr. Spooner (see the plan in *Archaeol. Survey Report, Frontier Circle*, 1910–11), shows also a close approach to the Rawak shape. Considering that its main features can be distinguished also on a number of the miniature Stūpa models in clay (e. g. So. A. 006, in Pl. CXXXIX) excavated by me at the ruined site of Ch'iao-tzŭ, south-east of An-hsi, it is clear that this cross-shaped Stūpa base represents a development which was known from the Indus to Kan-su. But where was it originally started?

[5] Cf. *Ancient Khotan*, i. pp. 483 sq.

the first 'Tim' was duly sighted. It proved the remains of a completely ruined Stūpa, rising about twelve feet above the sand and displaying a base about twenty-four feet square. The sun-dried bricks on the top measured fifteen by nineteen inches, with a thickness of three. A bare depression running southward showed near by remains of mud walls, almost completely eroded, and much pottery débris. Specimens of the latter, including two pieces showing a dark green glaze, are included in the list of antiques at the end of this section. I also picked up a small pencil of Chinese ink or graphite and several tiny Chinese coins, without legend and showing much-clipped rims, which Mr. J. Allan is inclined to ascribe to the fifth century A. D. This small 'Tati' and the adjoining site was said to be known to 'Otanchis', or collectors of fuel from the oasis, by the name of *Kök-kum-ārish.*

Traces of ancient canals.

About a hundred yards farther south a narrow irrigation cut, only two to three feet wide, was traceable for a distance of about thirty yards, running from south-west to north-east. Still continuing to the south I came, after another two hundred yards, upon the marks of an ancient tank, about fifty feet across. Its earth embankment, once hardened by moisture, still rose clearly above the level of the surrounding ground which wind erosion had lowered. Even the little earth-cone known as *dömbel*, which the villagers to this day invariably leave in the centre of their tanks,[6] was well recognizable. Some sixty yards to the south rose another much-decayed mound of sun-dried bricks, about twenty-five feet in diameter and standing about eight feet above the surrounding sand. Though no structural outlines survived, it could scarcely be anything else than the remains of a Stūpa. Close to the south of it the curving line of a canal, about eight to nine feet wide, could be followed for over thirty yards. Its banks were still fairly hard and showed in places salt efflorescence left by moisture. At its bottom I found several much-fissured pieces of ancient wood from the Terek or cultivated *Populus alba.* Also a narrow side-channel branching off to the north-west was easily made out. The same canal according to Kāsim, my guide, reappeared at several points further to the south, temporarily left bare by the high dunes. It manifestly came from the Yurung-kāsh which with the right bank of its present flood bed touches a line within seven miles or so west of the site.

Ruined shrine of *Kök-kum-ārish.*

The 'old house' of which my guides had spoken, lay hidden away in a curious bay-like depression fringed by tamarisk-cones and steep dunes a short distance eastwards. It was easy for me to recognize that the scanty remains were those of a rectangular temple cella built in timber and plaster, measuring inside twenty-seven feet three inches on the north and south and twenty-four feet ten inches on the other two sides. After the fashion of the Dandān-oilik shrines the cella was enclosed on its four sides by an outer passage about seven and a half feet wide. The rapid clearing effected by the small party I had brought with me, showed that the remains of the cella walls rose nowhere more than two feet above the plastered floor. Their thickness was about six inches. The original timber framework had completely perished under the influence of damp from subsoil water, leaving matrices of posts about six inches broad.

But where accumulation of drift sand in the corners had preserved the stuccoed wall surface this still retained traces of the original decoration in colours. This consisted chiefly of floral tracery painted in black over red ground. A large flower about seven inches across recurred in several places and closely resembled the four-petalled clematis-like flower with which I was familiar from the ancient wood-carving discovered at the Niya Site in 1901, e. g. the decoration of the wooden chair (N. vii. 4).[7] Elsewhere the remnants of decorative motifs recalled the fresco ornamentation in the central hall of the ruined dwelling (N. III) at the same site[8] both in design and colouring. This was particularly the case on portions of painted stucco which were found at the foot of the inner wall in

[6] See *Ancient Khotan*, i. p. 379.

[7] See *ibid.*, i. p. 397; ii. Pl. LXVIII.

[8] See *ibid.*, i. p. 333; ii. Pl. VII.

the enclosing passage eastwards. These had evidently fallen down from the upper part of the wall now destroyed and had been subsequently protected by the sand. Here the four-petalled clematis appeared painted in terra-cotta colour over white stucco, with a scroll ornament in black resembling a cinctured garland in loops.

Approximate date of shrine.

This style of decoration distinctly favoured the assumption that the ruined shrine belonged, like the Rawak Stūpa, to a period which may be approximately placed between the fourth and seventh century A. D. The total absence of T'ang or later coins among the 'cash' pieces picked up under my eyes on the neighbouring 'Tati', or brought to me from this neighbourhood, confirmed that assumption. With it also agreed the considerable depth, from ten to twelve feet, to which wind erosion had lowered the unprotected ground immediately adjoining the ruin. That the latter had suffered by fire, either before or after its abandonment, was suggested by plentiful charred débris within and near the cella and the blackened appearance of the wall stucco in places.

Extent of abandoned cultivation.

But it would be manifestly unsafe to draw from this isolated fact any conclusion as to why this whole tract was abandoned. On the other hand the day's observations were quite sufficient to prove that continuous cultivation must once have extended between the present north edge of the oasis near Suya and the Rawak Stūpa, an area some eight miles from south to north and now completely overrun by high dunes. The early date of abandonment which the extant data suggest for this tract has a special interest. In the first place the close vicinity of the Yurung-kāsh River, which still supplies this ground with abundant subsoil water, did not avail to protect it from lapsing into absolute desert. In the second place it is important to observe that an area so near to the main oasis was abandoned centuries before the desert sands were allowed to overrun the settlement of Dandān-oilik, some sixty miles further out in the desert north-eastwards. It is a clear indication that the progress of general desiccation cannot by itself supply an adequate explanation of all such changes in the extent of cultivated areas.

On the morning of September 17, after a final survey of the dunes in relation to the walls still exposed, I said farewell to Rawak and proceeded to the ruined site of Kīne-tokmak whence Rōze, my old guide Turdi's stepson, and his 'treasure-seeking' companions had brought to Khotan fragments of small stucco relievos which had once served for wall decoration, of exceptional hardness and yet withered and cracked by long exposure to the summer heat and fierce winds of the desert. By moving first for about three-quarters of a mile a little south of east my guides were able to show me a 'Tim' they had previously mentioned; this proved a badly decayed Stūpa mound, about fifteen feet high and almost completely enveloped by the foot of a big dune. Striking thence to the north-east we emerged after about half a mile from among the high dunes on to a belt of ground where the ridges of drift sand were low and small patches covered with pottery débris frequent. This was said to extend northward to the site known as *Jumbe-kum* which I had visited in April, 1901.[9]

Remains of *Kīne-tokmak.*

After having covered from Rawak a total distance of close on four miles I arrived at the 'old house' from which Rōze and his men had brought their relievo fragments. It stood in the middle of a small plain, covered with dunes only six to ten feet high. The condition of the ruin corresponded exactly to the conditions I had deduced from those scanty relics. It consisted of the remains of ancient brick walls, forming the corner of a rectangular structure and traceable for about thirty-four feet on the south-east side and about forty feet on the south-west. If a much-broken wall section to the north-west belonged to the missing part of the quadrangle, the latter, when intact, would have measured about sixty-two by eighty-two feet, the longer sides facing to north-east and south-west. But the ground was far too much eroded to permit of safe measurements. The extant

[9] See *Ancient Khotan*, i. p. 502.

wall portions rose only about two feet above the original ground level. But the small fragments of decorative stucco relievos picked up near them, and the presence of an outer passage some three feet broad running along the south-east wall, left no doubt about their having once enclosed a temple cella. But what was once the interior of this shrine now showed as a hollow lying more than six feet below the bottom course of bricks in the extant wall remains (Fig. 38). The soil washed out under the latter, as if by a current, showed plainly how wind erosion was proceeding in its work of destruction.

Decorative stucco relievos.

Complete as the havoc had been among all structural features of the ruin, it had not sufficed to efface all traces of its original decoration. Thus the small fragments of hard white stucco which were picked up on the eroded ground once occupied by the shrine, make it quite clear that the relievos adorning its walls must have closely resembled in character and style those brought to light in the Rawak Vihāra. Among the pieces described in the list at the end of this section are details from the drapery of large images (Ki. 01. b, 06, 07, 0011); and from the lotus wreaths which formed the border of vesicas (Ki. 01. a, 012). Flame-tongues once belonging to large aureoles are particularly frequent (Ki. 03, 08–14, etc.). From life-size relievo images also a few small fragments have survived (Ki. 04. 015). In character all these tiny relics of a Buddhist shrine curiously recalled those recovered in much greater abundance from the Kighillik site near Ak-sipil.[10] It is possible also that the great hardness of the Kīne-tokmak fragments, all in a white stucco resembling plaster of Paris, may be due, just as there, to accidental burning when the shrine was abandoned. Yet bleached pieces of carved wood were also found among the small débris, one of them, Ki. 01. c, showing clearly a Buddhist rail pattern.

Ruined dwellings north of Kīne-tokmak.

From here I proceeded north across low dunes to where Ahmad, a 'treasure-seeker' from Suya, had to show me other 'old houses' about a mile distant. They proved to be the remains of some modest dwellings built with timber and wattle walls, first destroyed by erosion and finally by the burrowings of those who had searched them for treasure whenever the march of the dunes left them exposed during the course of centuries. In the least injured among them, two rooms about fifteen feet long and some thirteen feet wide could still be distinguished with their walls showing horizontal reed bundles between the plastered faces. In one of the rooms a row of circular holes in the plaster flooring, about two feet six inches across and six inches deep, evidently marked the position once occupied by large jars. No finds apart from pottery fragments rewarded the clearing made at these scanty ruins. Some more of the same type were said to be scattered among the dunes further north. These dunes rose to twenty-five feet or more.

'Tati' remains towards old river bed.

Turning thence to the south-east, we reached ground where the dunes were rapidly getting lower and erosion had run its full course. Here the marks of ancient occupation were abundant, but showed distinct approach to the familiar 'Tati' type. Pottery débris reddened large stretches of eroded ground. Yet here and there more interesting traces still survived in the light drift sand. There were the low stumps of fruit trees and poplars which once surrounded the cultivators' humble dwellings, now completely vanished. At one place a row of Jigda or Eleagnus-trees clearly marked an orchard. Among the small objects picked up here was a fine piece of cut-glass, Ki. 0017, the rim of a vessel, of pale yellow-green colour and decorated outside with a well-modelled festoon ornament. It is noteworthy that the only coins among the day's 'finds' at Kīne-tokmak were both uninscribed Chinese pieces of a type ascribed to about the fifth century A. D.

For a distance of nearly three miles from the northernmost of the Kīne-tokmak ruins, these traces of ancient occupation continued unbroken until the line of the old river bed already

[10] Cf. *Ancient Khotan*, i. pp. 477 sq.

mentioned was struck again to the south-east. Here a belt of flourishing desert vegetation, including many wild poplars, indicated the course of still subsisting subsoil drainage, and we halted for the night near a brackish well known as Tār-kuduk.

OBJECTS BROUGHT FROM RAWAK

Rawak. 001. Pottery fr. of bowl of fine red ware. Plain rim; orn. slightly below edge with two sunk lines. Exterior surface has irregular bands of pebble burnishing. $2\frac{1}{2}'' \times 1\frac{1}{2}''$.

Rawak. 002. Spindle-whorl of light red terra-cotta; found near Stūpa base. Diam. $1\frac{1}{8}''$; thickness $\frac{3}{4}''$.

Rawak. 003. Stucco relief of standing Buddha, resembling K. S. 007. (Brought by Kāsim, of Tawakkel, as found at some ruins near Rawak.) Work, however, much looser. Halo has border marked by a groove. On robe traces of red. Feet broken off. Hard white stucco. $6\frac{1}{2}'' \times 2\frac{3}{4}''$.

Rawak. 004. a, b. Two pieces of plaster, soft, friable. Practically no surface left. (*a*) $2'' \times 1\frac{7}{8}'' \times \frac{1}{4}''$; (*b*) $1\frac{1}{2}'' \times 1\frac{1}{4}'' \times \frac{1}{4}''$.

OBJECTS FOUND AT KÖK-KUM-ĀRISH

Kök-kum. 001. Pottery fr. of handle; hard dark red ware covered with very dark blue-green glaze. $1\frac{15}{16}'' \times 1\frac{3}{16}''$.

Kök-kum. 002. Pottery fr. of hand-made vessel. Ill-levigated reddish-yellow clay. $1\frac{9}{16}'' \times 1\frac{3}{8}''$.

Kök-kum. 003. Pottery fr. of hand-made vessel. Dark red gritty ware; one surface is smooth, the other rough. $1\frac{15}{16}'' \times 1\frac{9}{16}''$.

Kök-kum. 004. Pottery fr. of splayed rim, in light reddish-yellow ware. Wheel-made. $1\frac{3}{4}'' \times 1\frac{9}{17}''$.

Kök-kum. 005. Pottery fr., dark grey ware; rather gritty; no ornament. $1\frac{3}{4}'' \times 1\frac{1}{8}''$.

Kök-kum. 006. Pottery fr., hard-fired, grey, quite free from grit; outside shows traces of bright green glaze. $1\frac{3}{32}'' \times \frac{11}{16}''$.

Kök-kum. 007. Half of white stone disc; flat, smooth, polished, pierced at centre. Thickness $\frac{7}{16}''$; diam. $1\frac{7}{16}''$; diam. of hole $\frac{3}{8}''$.

Kök-kum. 008. Short octagonal pencil, of substance resembling graphite. Pointed at one end, pierced through at middle; marks on paper. $1\frac{1}{8}'' \times \frac{1}{4}''$.

OBJECTS ACQUIRED AS FOUND NORTH OF SUYA

N. of Suya. 001. Terra-cotta appliqué fr. of ornament, elliptical with bead setting. $1\frac{1}{16}'' \times 1''$.

N. of Suya. 002. Terra-cotta appliqué fr. Rosette of nine round bead-like petals in circle round centre bead. Diam. $\frac{5}{8}''$.

OBJECTS FOUND AT KĪNE-TOKMAK

Ki. 01. a. Stucco relief fr. of lotus wreath, like Ki. 012. White stucco. $1\frac{1}{4}'' \times 1''$.

Ki. 01. b. Stucco relief fr. of hanging drapery with zigzag folds. White stucco, burnt. $3\frac{1}{8}'' \times 1\frac{1}{2}''$.

Ki. 01. c. Wood-carving; part of Buddhist rail. Sq. post-bases in high relief bearing in-cut X's. These joined by two rails on lower plane, between which sq. holes. Broken above, below, and at each end. Hard, but split. $11\frac{3}{8}'' \times 1\frac{3}{8}'' \times 1''$.

Ki. 03. Stucco relief fr. One of many representing flames; each flame cast separately, an elongated S curve, with parallel grooves, ending in small whorl. White stucco, burnt. Full length 4″. Ki. 03, 2″. (*a*) From same mould Ki. 08, 011, 014, 006, 009. (*b*) Corresponding, but with opposite curve, Ki. 09, 010, 013, 004, 008.

Ki. 04. Stucco relief fr. Spiral curl of hair, on a flat disc. Diam. $1\frac{1}{4}''$.

Ki. 06. Stucco relief fr. of drapery in S curve. Traces of green paint preserved in the grooves. White stucco, burnt. *C.* $2\frac{1}{2}'' \times 1''$.

Ki. 07. Stucco relief. Fan-like end of drapery. Traces of red in grooves and on back. Light drab mud. $3\frac{1}{2}'' \times 2'' \times \frac{7}{16}''$.

Ki. 08, 09, 010, 011, 013, 014. Stucco relief frs. Flame. See Ki. 03.

Ki. 012. Stucco relief fr. of lotus wreath. No colour. White stucco. $2\frac{1}{2}'' \times 1\frac{5}{8}''$.

Ki. 015. Stucco fr. Tip of R. big toe of life-size fig. Outer shell. No colour. White stucco. Nail $\frac{5}{8}'' \times \frac{5}{8}''$; $1\frac{3}{4}'' \times \frac{7}{8}''$.

Ki. 017. Stucco relief fr. Circular nimbus. Border marked by broad groove. White stucco, fired. Diam. $1\frac{13}{16}''$.

Ki. 018. Terra-cotta fr. from half cast of handle in form of winged horse; only hindermost part remains. Length $1\frac{13}{16}''$.

Ki. 019. Stucco relief fr. Spiral curl like Ki. 04. Diam. $1''$.

Ki. 001. Fr. of pottery, hard red clay with leaf-green glaze mottled with black spots formed under glaze, prob. owing to presence of metallic oxide in body. Perhaps Chinese; resembles green-glazed ware made from Han to T'ang times; but very prob. local fabric. $2\frac{1}{8}'' \times 1\frac{3}{4}''$.

Ki. 004, 006, 008, 009. Stucco relief fr. Flame. See Ki. 03. (*b*). $3'' \times 1\frac{1}{2}''$.

Ki. 005. Stucco fr. Part of background (?) of fig. Traces of pale blue. White stucco, burnt. $2'' \times 1\frac{3}{4}'' \times \frac{7}{8}''$.

Ki. 0010. Cylindrical bead of white stone. Length $\frac{1}{8}''$; diam. $\frac{3}{16}''$.

Ki. 0011. Stucco relief fr. Waved edge of a piece of drapery. Traces of green in grooves. On inside part of socket for core. White stucco, burnt. $3'' \times 2''$.

Ki. 0012. Hexagonal bead of yellow glass. Sides bevelled from both ends to a central edge. Here at widest point, diam. $\frac{5}{16}''$. End to end $\frac{1}{4}''$.

Ki. 0013. Glass fr. of bowl. Carinated wall curving out and down to base. Pale green glass. Orn. in applied thread of same glass. Gr. M. $1\frac{1}{2}''$; thickness $\frac{1}{16}''$ to $\frac{3}{16}''$.

Ki. 0014. Pottery fr. of hand-made vase. Hard light red clay, fairly fine. Surface shows pattern of circles stamped irregularly. Gr. M. $1''$; thickness $\frac{1}{4}''$.

Ki. 0017. Glass vessel, part of; rim of pale yellow-green translucent glass decorated outside with large festoons hanging from horizontal band and separated by pear-shaped tassel ornament; this design in cut glass; band moulded. H. $1\frac{3}{4}''$; diam. was *c.* $4''$; thickness $\frac{3}{16}''$ to $\frac{1}{8}''$.

Ki. 0026. Wooden hair-comb; cf. L. A. VIII. 001. One end broken, but other has strip $\frac{3}{8}''$ broad shielding the teeth. Above teeth five incised lines on each side. H. $3''$; width *c.* $3''$; h. of teeth $1\frac{3}{8}''$.

Ki. 0027. Wooden strip off piece of furniture with foliage carved in relief. $8'' \times \frac{7}{8}'' \times \frac{3}{4}''$.

OBJECTS ACQUIRED AS COMING FROM KĪNE-TOKMAK

Ki. 002. Terra-cotta monkey squatting on heels; arms outstretched, hands joined as in prayer. Head lost. H. $\frac{1}{2}''$.

Ki. 003. Terra-cotta monkey, squatting on heels, attitude as in Ki. 002, but arms and head lost. H. $\frac{1}{2}''$.

Ki. 007. Steatite (?) seal having upper part bevelled away to form smaller, flattened handle, pierced for suspension. Face, $\frac{5}{8}''$ sq., contains single undetermined Chin. char. not in normal Seal writing (L. C. Hopkins). H. $\frac{3}{8}''$.

Ki. 0016. Fr. of white stucco, prob. background to relief. No colour. $2\frac{1}{2}'' \times 1\frac{5}{8}'' \times \frac{3}{8}''$.

Ki. 0018. Oblong flat bronze seal, with flat pierced handle behind. Intaglio linear design. $\frac{5}{8}'' \times \frac{1}{2}''$.

Ki. 0020. Oblong flat brass amulet. Intaglios on each side, prob. inlaid. On one side a stag on his knees, to L. looking back R. Other side much defaced; design possibly of two fronting birds, of degenerate type. $\frac{9}{16}'' \times \frac{7}{16}'' \times \frac{1}{8}''$.

Ki. 0021. Black opaque paste seal, rectangular, pierced through ends. On one narrow, and on one broad side are five conical holes arranged as on a cubical die. $\frac{9}{16}'' \times \frac{1}{2}'' \times \frac{3}{8}''$.

Ki. 0022. Green soapstone, sq., flat piece of. Edges bevelled on one side. $\frac{9}{16}''$ sq.; thickness $\frac{3}{16}''$.

Ki. 0023. Half bronze ring, with round bezel containing cornelian, cracked. Diam. of ring *c.* $\frac{3}{4}''$; diam. of stone $\frac{1}{4}''$.

Ki. 0024. Bronze handle. Knob projecting over joint of two arms. Space between arms heart-shaped. Prob. handle of seal. $\frac{3}{4}'' \times \frac{1}{2}''$.

Ki. 0025. Bronze pendant, consisting of two balls bound round with wire. Below and between them a cluster of five small balls. The whole suspended by a ring. $\frac{1}{2}'' \times \frac{1}{2}'' \times \frac{3}{16}''$.

Ki. 0028. Bronze fr. of mirror (?). Much corroded. Irregular shape; slightly curved surface. $1\frac{1}{2}'' \times 1\frac{3}{8}''$; thickness $\frac{1}{16}''$.

SECTION V.—THE SITE OF AK-TEREK

March to Hanguya 'Tati'.

On the morning of September 18 I started due south in order to visit the site of Ak-terek, from which Rōze and his 'treasure-seeking' companions had brought me interesting terra-cotta relievos unmistakably derived from the wall decoration of some Buddhist shrine. Marching first for about three miles along the edge of the old river bed, and for another eight or nine across a barren expanse

of light dunes, I arrived at a ruined mound in which I speedily recognized the Stūpa of *Arka-kuduk Tim*, already visited in 1901 from the side of Hanguya.[1] Though our route crossed plentiful patches of bare loess soil clear of sand, the only vestiges of ancient occupation I noticed consisted of a small and completely decayed brick mound, five feet high, passed at a distance of about six miles from our camp at Tār-kuduk, and of a fairly large stretch of 'Tati' which we traversed before reaching Arka-kuduk 'Tim'. It formed part of that extensive débris area, generally designated as *Hanguya Tati*. From the description of my faithful old guide Turdi, now no more, I knew this to reach north-westwards as far as Ak-sipil, and a subsequent visit in March, 1908, showed it to spread quite as far on the east.[2]

I was aware that the ruin forming my goal was situated at some point of the narrow strip of desert which projects from the Hanguya 'Tati' to the south, dividing the cultivation of the Hanguya and Yurung-kāsh tracts, and which in April, 1901, I heard designated as *Arkalik*, the 'back lands'. But I well realized, as I made my way to the south-west across five miles or so of sterile dunes, how difficult it would have been to search for it without expert guidance. Here and there small patches of bare ground strewn with potsherds cropped out among the sand ridges. But on our left the trees of the outlying hamlets of Hanguya were already well in view before we struck the edge of a larger débris area only about a quarter of a mile to the north-east of the promised site.

Arrival at Ak-terek ruin.

Of the temple ruin, which Rōze's description of a 'Būt-khāna' and the decorative relievo pieces brought away had led me to expect, no structural remains whatever were visible above ground. But plentiful fragments of the same type could be picked up near a small dune which my guides had taken the precaution to mark by a rag-topped staff.[3] There were small relievo Buddhas seated within vesicas of lotus leaves, portions of wreaths, cloud scrolls, flame-bundles, and other relievo fragments closely resembling in character and style the appliqué stucco decoration of the halos which in 1901 I had discovered at Rawak round the colossal images. To find the friable stucco of the Rawak relievo work replaced in these fragments by what seemed terra-cotta was in itself very curious. But still more puzzling at first sight was their presence among the pottery débris of a regular 'Tati'; for of structural remains, such as temple walls, the level surface of sand showed no trace whatever. Like the potsherds around, these relics of relievos, once decorating the walls of an ancient temple, now rested on nothing but soft eroded loess.

Search for structural remains.

In the absence of any surface indications such as I had to guide me at Dandān-oilik and other sites previously explored, the search for more substantial remains seemed here to demand systematic trial trenches. For such the dozen 'treasure-seekers' who had tramped after us in the broiling sun were an inadequate force. But in order not to lose time I set them to dig near the north foot of the dune where the terra-cotta fragments lay most numerous. Chance for once favoured us; for after burrowing down in the loose sand for only two feet, the remains of a fairly thick wall in reddish clay was struck, and from the débris layer near it, covering a plastered floor some two feet lower down, more relievo fragments of the same description emerged in rapid succession. These finds continued as far as the wall could be followed before dusk overtook us, and thus furnished assurance that the wall indeed belonged to a temple.

Hardness of stucco fragments.

From the lowness of the wall laid bare and the entire disappearance of its outer facing it was clear that the temple had undergone almost total destruction in its structural features. Yet if larger

[1] See *Ancient Khotan*, i. p. 471, with Fig. 54.

[2] See *Ancient Khotan*, i. p. 470; also below.

[3] All relievo fragments, potsherds, beads, and other small remains which were picked up at the site in my presence bear the marks A. T. 001–00122. Pieces brought to Khotan by Rōze as finds from Ak-terek, are marked A.T. 01–056. Remains yielded by subsequent excavation bear the distinguishing marks A.T. i, A.T. ii, etc., indicating the provenance.

sculptures or frescoes, such as the well-preserved walls of Rawak or Dandān-oilik had yielded, could not here be hoped for, there was some compensation in the abundance of decorative details and the ease with which their remarkable hardness allowed them to be recovered. At Rawak the same relievo decoration consisted of unbaked clay so friable that many of the pieces broke in the very attempt to remove them.

Gilt appliqué relievos.

There was another gratifying experience to reward that day's experimental digging at a site which had promised so little at first sight. Again and again the practised eyes of my diggers noticed pieces of appliqué relievo still retaining tiny flakes of gold or else detached flakes—unmistakable evidence that the greater part of the wall decoration must have once been gilded. For the first time I had here before me definite confirmation of the hypothesis which I had formed in explanation of the leaf-gold washed from the culture-strata of Yōtkan. In that gold I had recognized the remains of the profuse gilding which an early Chinese record attests for the sacred buildings of Buddhist Khotan.[4] But Yōtkan had not furnished so far a single gilt object from a building; evidently there the wood and friable stucco, which alone appear to have served as material for the decorative features, had completely decayed in a soil kept ever moist by irrigation.

Resumed cultivation on abandoned area.

My camp had been pitched at a farm close to the edge of cultivation near the village of Ak-kul, and thither I made my way in the evening. The dunes to be crossed on our way eastwards were so high and sterile that I felt surprised when I reached the first fields after less than two miles. Returning next morning to the site, I could observe how the area of moving sands is steadily being pushed back here by resumed cultivation. The lands of Ak-kul had been brought under irrigation only some fifteen years before, and what I saw here was the best illustration of the process by which the whole sandy waste, separating the Hanguya and Yurung-kāsh cantons, is now being gradually recovered from the desert. In the fertile loess soil, to which new cuts carried ample water, the poplars, willows, and Jigda-trees usually planted along the edges of fields were shooting up rapidly. Hence it was easy to note the new conquests made each year by advancing irrigation. The belt of luxuriant reed beds and scrub which was moving in front of it, fed by the overflow of the Ak-kul canal, was fast approaching from the east the ground where earlier occupation has left behind its pottery débris. Was the time yet to come when, under the pressure of increasing population and the growing need of land, the oasis would victoriously recover most of the ground lost to the desolation of the Hanguya 'Tati'—or would slowly progressing desiccation stop the movement?

Structural remains of Buddhist shrine.

This advance of human activity made it easy for me to collect overnight an adequate posse of labourers for the excavation of the ancient structure. Working with close on sixty men, I soon laid bare, on September 19, what proved to be the north wall of a temple cella, having an outside measurement of fifty-three feet on this side, together with an adjoining passage, five and a half feet wide. The plan (Plate 4) shows that this passage, as in the case of the Dandān-oilik shrines, must have extended all round the four sides of the cella. Its outer wall, also of stamped clay, showed a thickness of three feet, while the wall separating it from the interior of the cella was two feet thick. On the west side the walls of cella and passage stopped short at a distance of about forty-two feet from the north-west corner, being there met by the mud flooring of some other structure. This was on a level about two feet higher than the passage floor, and probably was of later date. On the east side I had the passage cleared on September 20 for a distance of about twenty-two feet. At this point the digging was stopped, as the sand slipped in from the dune, which extended over most of the cella area. The height of this dune would have made complete excavation a difficult and protracted task. I felt all the more justified in forgoing the heavy sacrifice of time and money

[4] Cf. *Ancient Khotan*, i. p. 194.

which the removal of all this sand would have cost, since the clearing of the north-west and north-east corners of the cella showed that the remains of terra-cotta relievos were here relatively few and in no way different in character from those which the clearing of the enclosing passage yielded in profusion.

As this clearing proceeded, first along the central part of the north passage (A. T. i) and subsequently towards its east and west corners (A. T. ii, iii), the rapidly increasing finds of small terra-cotta-like relievo pieces enabled me to make certain general observations. In the first place I was able to convince myself that these finds were not confined wholly to decorative fragments from large haloes, etc., but also included, though in much more restricted numbers, detached fragments such as fingers, ears, curls of hair, etc., which had once belonged to relievo images up to life-size. That the walls of the enclosing passage must have been once adorned by larger sculptures was thus conclusively proved. But no other indication whatever of such sculptures had survived in the débris layer which covered the original floor to a height of about two and a half feet. It appeared the obvious explanation that they had been made of friable clay which crumbled away, just as in the strata of Yōtkan, without leaving a trace.

Decorative stucco hardened by conflagration.

But the question thus raised as to why the smaller fragments had escaped the same fate soon led me to realize that this complete decay had been preceded and aided by a destructive factor of another kind. The general reddish colour of the clay in débris and wall remnants alike, the discovery of minute fragments of completely charred wood, the manifestly vitrified appearance which the surface of some of the relievo fragments showed, and other clear signs of accidental burning made it certain that the shrine had first suffered from a great conflagration. Then it became easy to see that it was the heat produced by this accidental burning which had given the terra-cotta-like hardness and colouring to the smaller appliqué relievos of the walls, as well as to such detached fragments as fingers, ears, head ornaments, etc., from the larger sculptures. Originally the material of all must have been the same friable stucco, i. e. sun-dried clay, which I had found in the Rawak relievos and statues alike. The heat of the conflagration had not been intense and lasting enough to penetrate the clay masses of the larger sculptures; but in the case of the small appliqué relievos and of those free-standing parts of sculptures which the fire could envelop, it had sufficed to produce the effect of a regular 'firing' and thus to protect them. The chemical analysis which Sir Arthur Church has been kind enough to furnish of a specimen from these stuccos, in Appendix D, shows that the result of this burning has been a substance closely resembling a sound red terra-cotta. Excepting such pieces, all the sculptures had completely decayed under atmospheric influences while exposed, and subsequently through moisture when the ground was levelled and probably kept under cultivation.

Gradual decay of burned shrine.

That some time had elapsed between the first destruction of the shrine and the complete levelling of its walls was indicated by a stratum of loess-like soil about one and a half feet thick intervening between the débris-layer over the original ground and a second layer of débris, about six inches in thickness, which was close to the present surface and contained many small relievos. The intermediate layer of loess was manifestly due to the same accumulation of fine alluvial dust which still proceeds all over the oases of the Tārīm Basin wherever there is enough moisture to retain it, and which steadily raises the ground level.[5] It was on the top of this layer that the hardened relievos fell when the walls were finally pulled down to make room for cultivation or some later structure. Fresh layers of loess then came to cover up and protect them until occupation finally ceased and the ground was abandoned to the desert dunes.

Effects of wind-erosion.

Wind erosion, ceaselessly proceeding between the shifting dunes, had now begun in turn

[5] See *Ancient Khotan*, i. 198.

to remove the exposed loess surface and to lay bare again the upper layer of relievos. It was this action of the winds which had done here, as it were, the preliminary spade-work and thus led to the discovery of the ruin in the midst of these vast 'Tati' areas where the pottery and other débris exposed on the surface come down to much later periods. I could trace the abrading effect of the winds also in a minor observation. Practically all relievo pieces still retaining evidence of gilding were found in the débris layer resting on the floor, whereas among the very numerous fragments from the upper stratum vestiges of gilding were very rarely met with and only in specially protected folds and groves. The explanation was not far to seek when we noticed how easily the light breeze blowing at the time would carry off the thin flakes of leaf-gold from gilt fragments if these were left too long exposed on the surface. No doubt, the combined effects of fire and moisture had greatly reduced the cohesion between the stucco surface and the gilding.[6]

Chronological indications.

In addition, the ruined shrine must have been long exposed to those repeated burrowings which threaten all remains close to inhabited ground in this region. Hence I could scarcely expect to come upon such datable archaeological evidence as only ruins abandoned once for all to the desert can preserve. Yet a careful search of the débris layers revealed indications of distinct chronological interest. From the style of the relievos, to be discussed presently, I had drawn the conclusion that this shrine must have been approximately contemporary with the Rawak Stūpa. This received confirmation from the fact that the only coin discovered in the ruin was a 'cash' piece of the uninscribed type which was current both under the Former and Later Han dynasties. It was found close to the floor of the west passage, A.T. v, near the foot of the outer wall where it may have been originally deposited as a votive offering below the base of some image.[7] The negative evidence which the absence within the ruin of any later coins furnishes, has some claim to attention; for it contrasts strikingly with the abundance of coins belonging to the T'ang, Sung, and early Muhammadan issues which the surrounding 'Tati' area yielded, and which conclusively proves that the ground itself continued to be occupied down to much later periods.

Finds of terra-cotta figurines.

Assuming this dating of the Ak-terek shrine to be true, the finds there of grotesque figurines in true terra-cotta of the type representing monkeys, familiar from the Yōtkan culture-strata, assume additional interest; for they furnish the first definite evidence as to the period when this branch of old Khotan art flourished. Already among the small relics which Rōze's men had collected at this site, and brought to me as specimens, there were a number of terra-cotta figurines of the type referred to, representing monkeys (A.T. 043, 046), and also camels (A.T. 038, 044, 056). They were said to have been picked up on eroded ground close to the reported 'Būt-khāna'. This origin was fully confirmed when, in the west passage of the temple, there came to light from the lower débris layer the portions of two relatively large monkey figurines, A.T. v. 1, 2, and another fragment, A.T. iv. 00164, in the east passage. The finds, in the same layer, of pottery decorated with saw-tooth and festoon ornaments, A.T. ii. 2, iv. 1–3, acquire interest for the same reason. Other pieces of decorated pottery, A.T. 001–0015, including a lamp handle with anthemion design, were picked up on eroded ground close to the shrine and may, partly at least, be assumed to belong to the same period. But, of course, in the case of small objects found on the surface of 'Tatis' where wind erosion may have

[6] I much regret that I did not pay sufficient attention to this fact in the packing of the Ak-terek finds. The cotton wool which I used for their first wrapping, proved, when it came to unpacking the relievo fragments in London, only too frequently to have stripped them completely of their gilding by catching the thin flakes of the leaf-gold. Hence no adequate idea of the number of gilt pieces found can be deduced from the corresponding entries in the Descriptive List below. In extenuation of the mishap I may mention that it would have been quite impossible for me to improvise on the spot that supply of tissue paper which alone could have obviated it.

[7] Cf. for similar finds of coins used as offerings at the Rawak Vihāra, *Ancient Khotan*, i. pp. 500 sq.

brought relics of widely different periods to rest on the same level, the chronological evidence of such finds can never be equally certain.

Fragments of relievo decoration in stucco.

The relievo fragments recovered from the débris layers of the shrine were so small that, had it not been for the evidence supplied by the stucco decoration which the walls of the Rawak Vihāra had retained still in position, it would have been difficult to form any adequate notion of their original character and arrangement. The relative ease with which the evidence of the Rawak relievos enabled us to interpret and classify these small *disiecta membra* of what must have been once an elaborate scheme of sculptural decoration, is itself, I think, the best proof of that close connexion in style I have referred to above. In spite of the selection already made on the spot, the number of relievo fragments to be examined was so great that it required much care and effort to group them systematically and to establish all the decorative motifs, etc., represented among them. For the results of this detailed analysis which I owe mainly to the painstaking and very experienced help of Mr. C. L. Woolley, I must refer to the Descriptive List below. In order to save repetition and waste of space stucco specimens of identical character, even if not cast from the same mould, have been listed as far as possible under one heading. For the purpose of facilitating a rapid survey of the chief decorative motifs those headings which contain such descriptions have been distinguished by asterisks.

Chief types of stucco relievos.

I must content myself here with brief references to the chief types of relievos which help us to form some idea of the general scheme of decoration adopted at this shrine. In the first place it is safe to conclude from the numerous fragments of ears, fingers, toes, noses, and other parts of the body more easily preserved through complete burning,[8] that the walls of the cella and passage must have been lined with relievo images of Buddha and Bodhisattvas just as the photographs of the Rawak Vihāra court show them. We have remnants of them also in the numerous pieces of drapery (A.T. i. 0028, 0029, 0063; iv. 0049; v. 0044, etc.). In the passage none of these images appear to have exceeded life-size, a limitation for which the relatively narrow space there available fully accounts. It may have been different within the cella, and I am inclined to think that the scantiness of sculptural finds in the corners we cleared there, may be due to the prevalence of colossal statues upon which the conflagration would have had far less effect, and of which the clay masses would in consequence decay more completely.

Stucco fragments from decorative aureoles.

That the images in the passage must have been surrounded by elaborate vesicas or haloes in relievo is proved by the abundance of decorative details which their shapes and the example of Rawak show to have undoubtedly belonged to such features. A selection from appliqué ornaments of this kind is illustrated by specimens reproduced in Plate VIII. The numerous pieces of a lotus-petal border (A.T. 0051, i. 0017), the cloud scrolls (A.T. 0030), and the still more frequent rows of flame-tongues (A.T. 0016, i. 0044, 0075) can all with certainty be ascribed to aureoles of varying sizes.[9] The examples of the Rawak Vihāra throw light also on the way in which the fields of these small Buddha aureoles were filled with plaques of varying design, showing floral patterns, conventional ornaments, or small figures of Buddhas. Of all these the Ak-terek fragments present a plethora. Of flower ornaments more or less elaborate we have often repeated specimens in A.T. 0020, 0060; i. 0012; of conventional patterns in A.T. 0033, 0019, 0087; v. 0050, etc. The Vajra with its fleur-de-lis shape often figures in them just as at Rawak.[10] Quite as frequent are small plaques of Buddhas seated within lotus vesicas (A.T. 0025. a, 0027, 0028; i. 0088; iii. 0089;

[8] See A.T. 0024, 0041; i. 006, 0010, 0052, 0053, 0058, 0084 (Pl. IX), 0087, 0098–00102; ii. 0048, 0051, 0058; iii. 001, 0023, 0030, 0038, 0047, 0062, 0063, 0066, 0070; iv. 0012, 0051, 0064, 0077, 00128, 00132; v. 001, 002, 004, 0072 (Pl. VIII).

[9] For the appearance of the large aureoles of Rawak, see *Ancient Khotan*, i. Figs. 63–5; ii. Pl. XVIII.

[10] Cf. *Ancient Khotan*, ii. Pl. XVIII. c, LXXXIII.

Plate VIII), the Rawak walls again showing clearly the manner of their disposition. Everything in the subject and style of these aureoles and their decoration points to the closest relation between the work at both sites and an approximately contemporary origin.

Differences of style in decorative motifs.

Whether the larger appliqué figures of seated Buddhas, of which A.T. 017 (Plate VIII) is a specimen, served also to decorate aureoles, or had an independent position, cannot be decided. Nor is it clear what place was occupied by the occasional female figures met with (iii. 0061; iv. 0066) or by the demons of which the heads have survived (iv. 009; v. 0025). Even grotesque animals seem to have found here and there a place in the wall decoration (iii. 0082; iv. 00161). Architectural fragments are rare (i. 0077; v. 0067, 0071). Where the mass of small appliqué pieces is so great, even the negative evidence furnished by the absence of certain motifs may deserve some attention. On this occasion I may note that the Ak-terek collection does not include a single specimen of those flying Gandharvīs and small standing Buddhas which, from the evidence of the shrines of Dandān-oilik, Khadalik, Kara-yantak, Farhād-Bēg, would seem to have been favourite subjects of decorative sculpture in shrines of this region during T'ang times. Marked differences can also be traced between these T'ang shrines on one side and the Rawak and Ak-terek group on the other in the style of ornamental designs. In the former certain motifs present a distinctly more florid development while others, like the fleur-de-lis shaped Vajra, have disappeared altogether. But detailed study of these changes must be left to workers of the future. Whether there was a corresponding development in the style of fresco decoration it is impossible to judge, since, as at Rawak, only the scantiest traces have survived of the painting of the Ak-terek temple walls (A.T. 00122).

Remains of smaller shrines at Siyelik.

That the architectural and decorative features traceable in the Ak-terek remains were typical of the Buddhist shrines of this region and period was proved by the visit I paid on September 19 to what my guides called the 'little Būt-khāna'. For about two miles we moved to the west-south-west over ground where low dunes alternated with extensive stretches of 'Tati' until the trees of Ak-terek village, which has given its name to the whole site, came clearly within view southwards. There, on a flat débris-strewn area clear of dunes, which my guides called *Siyelik*, I found the outlines of a small quadrangular Buddhist temple fully exposed and clearly recognizable by clay walls almost flush with the flat eroded loess soil around. The cella within measured about twenty-five feet by twenty-three feet. Along its sides an outer passage, about six feet nine inches wide, could be recognized by its plastered flooring. The centre of the cella appears to have been occupied by a base, about nine feet square, the stuccoed faces of which, now decayed into friable clay, still survived to a height of about six inches. There can be no doubt that this, like the base found in the temple cella of Endere,[11] had once served for the support of large stucco images.

Fragment of appliqué stuccos.

Fragments of appliqué relievos in stucco exactly similar in style and material to those which once adorned the walls of the larger shrine could be picked up on the surface, particularly near the south wall of the cella (Si. i). Some more turned up near the north-east corner (Si. ii), where I had the interior of the cella cleared down to the original floor, only about one and a half feet below the level of the extant débris. Certain decorative fragments look almost as if produced from the same moulds as corresponding appliqué relievos of small seated Buddhas, etc., found at the 'Ak-terek' ruin.[12] Most probably an identical original had served for the production of the moulds. There were found also fragments of larger Buddha heads (Si. i. 0016; ii. 005) closely corresponding in type to those of Ak-terek.

Physical changes testified by remains.

The hardness of these fragments was unmistakably due to accidental burning, as at the larger shrine, and there were plentiful indications to show that the ruin after its abandonment and the

[11] Cf. *Ancient Khotan*, i. pp. 423 sq.

[12] See Si. 003; i. 005, 009 in Descriptive List.

ground near it had undergone the same succession of physical changes. The layer of earth and mud-brick débris filling the cella was permeated by the tubular passages or cores which roots and vegetable fibres had left behind. These proved that the ruin must have been buried for a time under a gradual accumulation of cultivated loess layer. By that time the walls, as far as they reached above the ground had, no doubt, been pulled down and all materials which might be of use, such as the encased timber framework, abstracted. After cultivation had retreated from the site, wind-erosion must have been at work for a prolonged period. Small banks of loess rising up to six feet in height, and generally bearing on their top heavy pottery débris which had evidently protected them, rise like geological 'witnesses' above the general level of the 'Tati' quite close to the shrine. They mark the extent to which the surface of the ground has been lowered by the winds and the corroding effect of driven sand.

Pottery débris and human bones.

It is obvious that owing to this erosion the pottery débris found on the surface, of which I picked up specimens both at Siyelik and on my way back to the Ak-terek ruin (Si. 001, 002; A.T.S. 001–0010), may belong to widely different periods. It is probable that much of it dates from early Muhammadan times, since among the coins which my guides had collected for me from the whole Ak-terek site, including Siyelik, specimens of local Muhammadan coinage as well as 'cash' pieces of the Sung dynasty were largely represented (see Appendix B).[13] This may be assumed in particular of the fine glazed ware in various tints of green and blue which plentifully covered certain areas.

From the mass of human bones which mingled with pottery débris around the ruined cella, it was certain that the soil, now again carried off by the winds, had once served for interment. The inference seems justified that a burial-ground had been established here after the Muhammadan conquest, because the site once occupied by a Buddhist sanctuary continued to receive local worship as a Mazār.[14] Also close to the larger temple ruin of Ak-terek I noticed between the dunes large stretches of eroded ground thickly strewn with human bones, to which the same explanation would apply. Finally, to judge from the rate of erosion gauged at sites like those of Dandān-oilik, Khadalik, Niya, the abandonment of which can be fixed with approximate chronological certainty, I may note that the maximum height of the 'witnesses' observed at Ak-terek and Siyelik indicates that cultivation did not cease here until after some centuries of the Muhammadan period.

Small Stūpa mounds at Siyelik.

Apart from the ruined shrine just described the only structural remains my guides could show me at Siyelik consisted of two small 'Tims'. Both were much-decayed mounds marking the position of Stūpas. One situated about a quarter of a mile to the south of the temple ruin preserved its lowest base, about sixteen and a half feet square and three feet high, with a portion of a square upper story. A flight of stairs leading up on the south face could just be traced, with a width of eight feet at the bottom. A second Stūpa mound was visited about a quarter of a mile to the east of the last-mentioned ruin. This was smaller and also badly decayed, showing a base only eight feet eight inches square on the ground and completely broken above its lowest story which measured three feet in height.

Vast extent of 'Tatis'.

The interest of the survey effected during my three days' visit to the Ak-terek Site does not lie so much in the archaeological relics recovered as in the instructive glimpses it yielded of the remains which may yet lie buried below these vast silent 'Tatis'. Extending from east to west in a line of more than twelve miles this great area of shifting dunes and bare loess undergoing wind erosion

[13] Among 80 copper coins thus collected there were 28 of issues earlier than the T'ang dynasty; 31 Chinese pieces of the T'ang period (mainly Ch'ien-yüan and Ta-li) and 21 Sung and Muhammadan coins. The only coin picked up in my presence was a Sung 'cash' bearing the *nien-hao* of Pao-yüan (A.D. 1038–40).

[14] For Mazārs, always with cemeteries attached, marking sacred sites of Buddhist times in the Khotan region, cf. *Ancient Khotan*, i. pp. 121, 225, 463, etc.

is bound to hide more ruins than those which my treasure-seeking guides knew of at the time. It would be useless to speculate about the successive periods which may be represented among them. So much, however, is certain that, as erosion progresses, it is likely to bring to light remains far older than those which were left behind when occupation last ceased. Who could say how often the *péripéties* of the struggle between irrigation and desert have been enacted before on this ground—or how long it may take before the wind-swept débris now bare will be hidden again under fertile fields ?

Section VI.—LIST OF ANTIQUES FROM AK-TEREK AND SIYELIK

OBJECTS EXCAVATED OR FOUND AT AK-TEREK AND SIYELIK

A.T. 03. Stucco relief torso fr., with part of neck and R. arm of draped seated Buddha; left shoulder missing. Drapery rendered by stiff closely-set grooves. Second system of grooves (folds) crosses part of general one. Cf. A.T. 017 (not from same mould). Light red clay. $5\frac{1}{2}'' \times 5\frac{1}{4}'' \times 1\frac{1}{2}''$.

A.T. 05. Stucco relief fr. of Buddha, seated cross-legged upon lotus calix. Below is part of lotus-leaf border of plaque. Drapery rendered by close parallel grooves. Head missing. Red clay with remains of white slip. Delicate workmanship. $2\frac{5}{16}'' \times 2\frac{1}{4}''$ (head lost).

A.T. 08, 09, 025 (joined). Stucco relief fr. of Buddha, draped, seated. Lower part of face, L. side of halo, R. upper arm and torso to waist. Drapery rendered by stiff closely-set grooves; transverse folds round neck. From same mould as A.T. 017. Light red clay. $6\frac{1}{2}'' \times 8''$.

A.T. 011. a. Stucco relief fr. of halo, with L. shoulder of draped fig. attached. Red clay. $5\frac{3}{4}'' \times 4''$.

A.T. 012. Terra-cotta appliqué orn. Bull's (?) head. Very rude. $1\frac{1}{4}'' \times 1''$.

***A.T. 017, 017. a (joined). Stucco relief fr.** of Buddha. Plain peaked halo. Hair and Uṣṇīṣa smooth like cap. Eyes nearly closed, elongated, slightly slanting. Ears large, lobes elongated and pierced. Mouth and chin delicately worked. Draped torso; both arms, L. shoulder, and all below waist missing. Folds marked by stiff closely-set grooves; transverse folds across R. shoulder. Light red clay. No signs on back of any attachment. $12'' \times 7\frac{3}{4}''$; $3''$ thick. Pl. VIII.

A.T. 06, 09. a, 011, 013, 014, 015, 020, 021, 022+027, 023, 024, 028, 034, 035, 036; 00113; iv. 00112 from same mould.

A.T. 033. Stucco relief fr. of cylindrical object with hemispherical top; perhaps human toe. Drab clay. $2\frac{1}{16}'' \times 1\frac{7}{16}''$.

A.T. 038. Terra-cotta fr. of rider on camel; fore-quarters and hump of camel, R. leg and foot of rider (monkey ?) remain. Hair marked by rows of incised lines. $4\frac{1}{4}'' \times 3''$. Pl. IX.

A.T. 040. Fr. of pottery, orn. with applied palmettes pendant from moulding of neck. Fine light red clay. H. $1\frac{5}{16}'' \times 1\frac{13}{16}''$. Pl. IV.

A.T. 041. Fr. of terra-cotta vessel, having appliqué elliptical jewel-like bosses. Bright red clay. $1\frac{1}{4}'' \times 1\frac{3}{4}''$.

A.T. 042. Fr. of pottery, orn. with tool-incised lines, curves, and dots. Very fine terra-cotta coloured clay, highly finished surface. $1\frac{1}{4}'' \times 1\frac{5}{8}''$.

A.T. 043. Upper part of terra-cotta monkey; wears conical fur cap with tail falling from peak to waist; clasps water-skin to breast. R. arm and all below waist lost; remainder still good and sharp. Body made in two halves, arms separate. H. $1\frac{1}{2}''$. Pl. IX.

A.T. 044. Terra-cotta head of camel; small punched eye; unworked tuft of hair over forehead. Condition poor; work roughly finished by hand. H. $\frac{15}{16}''$; width $1''$; thickness $\frac{9}{16}''$. Pl. IX.

A.T. 045. Fr. of pottery. Upper part of handle. From attachment thick leaf-like projection curves outwards and downwards; at back thin flat lip of vessel. Brown clay, very finely finished. $1\frac{1}{2}'' \times 1\frac{3}{8}''$. Pl. IV.

A.T. 046. Terra-cotta head and bust of monkey, wearing fur cap. Top of R. arm preserved, set forwards and slightly downwards. Probably a skin-carrier as A.T. 043. L. arm entirely lost and R. from just below shoulder; body from below breast. Rough work; solid moulding; hand-finished. H. $\frac{13}{16}''$.

A.T. 046. a. Terra-cotta appliqué orn. in form of double leaf, from vase. Light red clay. $1\frac{1}{4}'' \times \frac{7}{8}''$.

A.T. 047. Terra-cotta torso of nude fig.; base of neck to waist. Head, body below waist, R. arm and L. from below shoulder, lost; front of body broken off diagonally from R. shoulder to L. flank. H. $1\frac{7}{8}''$.

A.T. 051. Fr. of pottery from shoulder of hand-made vessel having appliqué orn. of palmette and grape-cluster pendant. Gritty red clay, very smooth outside; re-fired. H. $1\frac{1}{4}''$. Pl. IV.

A.T. 056. Terra-cotta camel; head and part of neck of; dot-circle eye; hair incised in parallel rows; large tuft

between ears. Whole R. side split away at juncture of two halves of mould. Very smoothly worked. H. $1\frac{3}{16}$". Pl. IX.

A.T. 001. Handle of pottery vessel. Outside is lower part of body of reptile with hind-legs and tail. Body and R. leg deeply notched. Below tail remains of dot orn. Very coarse red clay. H. $3\frac{3}{8}$"; width $2\frac{1}{4}$". Pl. IV.

A.T. 002. Two terra-cotta water- or wine-skins tied at neck, united across front by broad band, orn. down centre with large single chevrons, at edges with incised dashes, broken at either end; prob. load of some beast. Very fine work. $\frac{5}{8}$" × $\frac{3}{4}$".

A.T. 003. Pottery handle, flat, heart-shaped, with stamped anthemion design; at base, attachment to vessel, with traces of small ring handle below. In shape, orn. and attachments precisely resembling handle of classical lamp. Cf. A.T. 0012 and *Anc. Khotan*, Pl. XLII. T.M. 002. b, c; 003. d. Slate-grey clay (re-fired) with worn, greenish-brown glaze. $1\frac{3}{4}$" × $1\frac{1}{4}$". Pl. IV.

A.T. 004. Fr. of pottery; part of handle. Over attachment flat lozenge-shaped ear projects horizontally, with incised palm-leaf orn. Brown clay, re-fired. $1\frac{1}{4}$" × 1". Pl. IV.

A.T. 005. Terra-cotta object, six-pointed like caltrop; hard-fired clay showing traces of green glaze; two prongs lost, others slightly broken. 2" × $1\frac{3}{4}$". Pl. IX.

A.T. 006. Fr. of hand-made pottery vessel; with band of comb-drawn festoons; below, raised band orn. with oblique stamps from toothed punch. Light red clay. $2\frac{1}{2}$" × $1\frac{5}{8}$".

A.T. 007. Pottery fr. from broad plain handle, with perished green glaze. Very coarse red clay re-fired. $2\frac{1}{2}$" × $1\frac{1}{4}$".

A.T. 008. Pottery fr., coarse, gritty, with perished green glaze. $1\frac{3}{4}$" × $1\frac{5}{8}$".

A.T. 009. Small fr. of green-glazed ware, from top edge of bowl. Light red clay. $\frac{7}{8}$" × $\frac{3}{4}$".

A.T. 0010. Fr. of pottery handle; large half-ring, hollow. At junction with body and on handle bands of stamps from five-toothed punch. Very coarse red clay. $3\frac{3}{4}$" × $2\frac{1}{8}$".

A.T. 0011. Pottery fr. from bottom and side of bowl. Coarse red clay with decayed blue glaze. 2" × $1\frac{5}{8}$".

A.T. 0012. Fr. of pottery vessel, squat with flat bottom, carinated sides and wide mouth with out-turned lip. On shoulder and lower ridge, oblique rows of punctured orn. stamped. Fr. of large handle; flat broad ring distinguished at upper attachment by broad orn. prob. palmette (cf. A.T. 003) at right angles; only base of orn. remains. Prob. a lamp. Ill-levigated red clay, re-fired. $3\frac{7}{8}$" × $2\frac{1}{2}$". Pl. IV.

A.T. 0013. Fr. of hand-made pottery. Hemispherical bowl, with flat lip; orn. with roughly oblique bands of stamped design of L's, crosses, and dots clumsily repeated. $3\frac{1}{2}$" × $5\frac{1}{2}$". Pl. IV.

A.T. 0014. Fr. of pottery, pale red, with dark green-blue glaze inside and out; outside glaze partly gone. $2\frac{1}{8}$" × $2\frac{3}{8}$".

A.T. 0015. a. Fr. of hand-made pottery vessel, with strip in relief pressed by thumb into series of scallops. (Cf. *Anc. Khotan*, Pl. XLI; T.M. 004. b.) Light reddish-drab clay, grey faced. 2" × $1\frac{1}{2}$".

A.T. 0015. b. Fr. of pottery, prob. part of cover; near edge appliqué band with series of wedge-shaped incisions made with toothed punch. Light red clay, buff surface. 2" × $1\frac{1}{2}$".

***A.T. 0016. Stucco relief fr.** of flame pattern; one of many. Moulds roughly triangular produced a relief *c.* 7" × $4\frac{1}{2}$" with, probably, 15 flames. Each flame takes form of flattened S curve with boldly incised line running down centre; two different moulds were used with S curves in opposite directions. Relief about $\frac{1}{2}$" high. Clay finely levigated, burned to a uniform light red or to a uniform mud colour; back of each piece shows finger-marks, etc., made when clay was pressed into mould; no trace of reeds on back. Surface covered with a thin limewash or slip; traces remain of gold-leaf. A.T. 0016. 5" × $3\frac{1}{2}$".

Similar pieces: A.T. 0017, 0069, 0070; i. 001, 0051. a, b, 0078, 0079, 0080, 0081, 0092; ii. 002, 0032, 0042, 0043; iii. 0036, 0043, 0090; iv. 002, 003, 004, 005, 0057, 0068, 00107, 00108, 00109, 00110, 00111; v. 0068, 0069.

A.T. 0018. Stucco relief fr. of flame pattern with curling ribbed flames, each separately moulded. Brick-red clay. $3\frac{1}{8}$" × $2\frac{1}{2}$".

***A.T. 0019. Stucco relief fr.,** curved half-round moulding, representing twisted strings of beads and plain fillets alternately.

Cf. A.T. 0094; i. 00116; ii. 001; iii. 0079; iv. 00115; v. 0090. Light red clay. 3" × $1\frac{5}{16}$"; h. of relief $\frac{9}{16}$".

***A.T. 0020. Stucco relief fr.,** one of many, from border of a large halo or haloes, cf. *Anc. Khotan*, Pl. XVIII, c. On pieces that can safely be attributed to common original there appear three distinct decorative elements: (*a*) foliate border $1\frac{3}{4}$" wide by $\frac{1}{2}$" high, consisting of continuous frond with closely set and deeply ribbed pointed leaves; (*b*) circular medallions, diam. $2\frac{5}{8}$", with double ring edge, inner band of separate leaf or flame motif, and central five-petalled flower; these were set close to border (A.T. iii. 0053); (*c*) conventional fleur-de-lis with double binding at neck and wavy stalk increasing in width and ending in two rounded lobes (A.T. ii. 007, iii. 0037); total length $4\frac{3}{4}$"; relief on one plane. These were set between the medallions, flower close to border (A.T. 0068), stalk at right-angles to it. Whole originally in crude clay which has been accidentally burned; one or two pieces show signs of vitrifaction. Clay well levigated, and whole surface covered with very thin limewash or slip; remains of gilding appear on one of the fleur-de-lis stalks; otherwise colours have perished together with most of slip. The same mould was generally employed for all the ornaments of each type;

these were all appliqué, short lengths of foliate border being cast in a shallow mould and affixed to a raised rim so as to stand in higher relief; fleur-de-lis in two sizes. For treatment of stalks cf. Coptic example, Königl. Museum, Berlin, *Altchristliche Bildwerke*, 62. Many frs. show on backs impress of reeds used in wall-facing. A.T.0020. $1\frac{13}{16}'' \times 1\frac{1}{2}''$.

From the same or similar haloes: (*a*) Border, A.T. 0021, 0062, 0068; i. 002, 003, 005, 0054, 0055, 0056, 0068, 0069. a–e, 0072, 0073; ii. 0028, 0039, 0045; iii. 0049, 0050, 0051, 0052, 0053, 0054; iv. 0010, 0056, 0069, 0097, 0098, 00106; v. 0032 (Pl. VIII), 0063. a, b. (*b*) Medallions, A.T. 0022, 0085; i. 0050, 0059 (Pl. VIII), 0097; ii. 0029, 0049; iv. 006, 007, 008, 0078, 0079, 00129. a, b, 00130. a, b; v. 0033. (*c*) Fleur-de-lis, flowers, A.T. 0066, 0084; i. 0011; ii. 007, 0034; iii. 0057; iv. 0013, 0070, 0074, 0075, 00124; v. 0049 (Pl. VIII). (*d*) Stalks, A.T. 0055, 0083; i. 0023, 0024, 0043, 0094, 0095, 0096; ii. 008, 0033, 0041 (Pl. VIII), 0046, 0047; iii. 0010, 0037, 0044, 0064; iv. 0026, 0027, 0028, 0029. a, b, 0058, 0059, 0073, 0080, 00104, 00121, 00122, 00123, 00125, 00126; v. 0014, 0015, 0016, 0082, 0083.

A.T. 0023. Stucco relief fr. of human face, mouth with very small portion of chin, carefully modelled, as A.T. v. 001, but finer surface destroyed. Hard red clay. $1\frac{7}{16}'' \times 1\frac{7}{16}''$.

A.T. 0024. Stucco relief fr. Very large, long human ear of which practically only outer cartilage is represented. Hard red clay. $4'' \times 2''$.

***A.T. 0025. a. Stucco relief fr.** of seated Buddha; one of several. Fig. has plain Uṣṇīṣa and nimbus, small rayed halo with border of lotus petals marked by central depressed rib. Hands and feet bare. Drapery rendered by close parallel grooves. Cf. *Anc. Khotan*, Pl. LXXXVII, R. 08 and A.T. 0027, 0028; i. 0088. In A.T. 0025. a L. arm and breast and all below breasts missing. Light red clay. $2\frac{3}{8}'' \times 2\frac{3}{4}''$.

From same mould: A.T. 0025. b, 0026. a, b, 0047, 0048, 0049, 0079; iv. 00114.

***A.T. 0027. Stucco relief fr.** of seated Buddha; one of many from large halo. (Cf. *Anc. Khotan*, Pl. LXXXVII, R. 08, and A.T. i. 0088.) Fig. originally had plain Uṣṇīṣa; drapery rendered by close parallel grooves; hands on lap folded under drapery; lobes of ears elongated; nimbus plain; halo plain inside with border of lotus petals having prominent double lobes. L. shoulder, all below elbows, and halo missing. Light red clay. $1\frac{3}{4}'' \times 1\frac{5}{8}''$.

From same mould: A.T. 0050, 0073, 0074; i. 0015; iv. 0055, 0067, 00113. a–d; v. 007, 0030.

***A.T. 0028. Stucco relief fr.** of seated Buddha. Fig. originally had plain Uṣṇīṣa; drapery rendered by close parallel grooves; nimbus with ray border. Hands bare; folded on lap. (Cf. *Anc. Khotan*, Pl. LXXXVII, R. 08, and A.T. 0027; i. 0088.) Head, L. side and arm, R. foot, and halo missing. Red clay. $2\frac{3}{4}'' \times 1\frac{7}{8}''$.

From same mould: A.T. 0075, 0078; iii. 0034; v. 0075.

A.T. 0030. Stucco relief fr. Cloud orn.; one of many from border of halo (cf. *Anc. Khotan*, Pl. XVIII, c and Pl. LXXXIII, R. ii. 2). There are two types, according as volute is to R. or L. for opposite sides of halo; but, though similar, not all of each type are from same mould. Clay well levigated, colour from red through drab to mud colour. Some pieces show on back impress of reeds used for wall-facing. Each volute moulded separately. A.T. 0030. $2'' \times 1\frac{1}{2}''$.

In same series: A.T. 0031, 0042, 0052, 0053, 0058. a, b, 0067, 00105. a–c, 00106, 00107; i. 004, 0013. a–c, 0014, 0047, 0048, 0049, 0060, 0064, 0074, 00129. a–e; ii. 003. a–c, 004, 0040, 0059. a–d; iii. 002. a–c, 003, 004, 005, 0085. a–c, 0086, 0087, 0088; iv. 0014. a–k, 0015. a–k, 0016. a, b, 0062, 0063, 0083. a, b, 0084, 00163. a–i; v. 005. a–h, 006. a–d, 0041, 0042, 0056 (Pl. VIII), 0057, 0064. a–c, 0093, 0094, 0095. a, b.

A.T. 0032. Stucco relief fr. Circular jewel orn.; large central boss within plain band and bead border; cf. A.T. 0061 and F. II. iii. 001. Light red clay. Diam. $1\frac{3}{8}''$.

***A.T. 0033. Stucco relief fr.** of crescent, one of many from series of wall ornaments consisting of triangle surmounted by crescent. Base of triangle plain, the two sides have border of Vandyke pattern between straight lines; field occupied by three elongated heart-shaped leaves with raised edges, all in fairly high relief; crescent marked with three incised lines, emphasizing border and centre. The clay differs in quality and varies in colour from light buff through red to mud colour. Triangle and crescent were moulded in one piece (A.T. i. 00114) and together stood $5\frac{1}{2}''$ high. Several fragments show behind impress of reed wattle used for wall-facing.

The following pieces are from the same mould: (*a*) Triangles, A.T. 0034, 0089, 0092, 0093, 0097; i. 00114; ii. 0031; iii. 0014, 0076; iv. 0033, 0099 (Pl. VIII), 00142. a, b, 00143. (*b*) Crescents, A.T. 0033; iii. 0012, 0013, 0077; iv. 0031, 00144; v. 0017. a, b (Pl. VIII), 0018, 0088.

A.T. 0035. Stucco relief fr., leaf orn., double-lobed, bound round at narrow end. Drab clay. $2\frac{1}{16}'' \times 1\frac{3}{16}''$.

From same or similar mould: A.T. 0099; ii. 0012, 0057; iv. 0036, 0094; v. 0059. Cf. type A.T. 0012.

***A.T. 0036. Stucco relief fr.** of pear-shaped orn. with incised heart design; prob. base of flower-stem; cf. A.T. i. 0012. Brick-red clay with white slip. $1\frac{11}{16}'' \times 1\frac{5}{8}''$.

From same mould are: A.T. i. 00122; ii. 0011, 0038; iv. 0035.

***A.T. 0037. Stucco relief fr.,** like *Takhtī* handle; but handle curves outwards instead of being angular. Red clay, white slip. $2\frac{15}{16}'' \times 2\frac{1}{2}''$.

From same mould: A.T. i. 00117; v. 0040.

A.T. 0038. Stucco relief fr. of drapery with three main folds and finer subsidiary folds. Light red clay. $2\frac{5}{8}'' \times 1\frac{1}{2}''$.

A.T. 0041. Stucco relief fr. Upper part of human ear. At point of junction with cheek is narrow vertical band with single row of short stamped crescents. Light red clay. $1\frac{7}{8}'' \times 1\frac{1}{2}''$.

A.T. 0043. Stucco relief fr. of curved double band decorated with bead orn. Cf. A.T. iv. 0091. Light red clay. $1\frac{1}{2}'' \times 1\frac{1}{4}''$.

A.T. 0044. Stucco relief fr., stamped all over with concave punch producing half-round projections; prob. bunch of grapes. Cf. A.T. v. 0062. Hard red clay. $1\frac{1}{2}'' \times 1\frac{3}{16}''$.

A.T. 0045. Stucco relief fr.; smooth, slightly convex face with fr. of curving square ridge at edge. Reddish-drab clay. $1\frac{7}{8}'' \times 1''$.

***A.T. 0051. Stucco relief fr.** of nimbus and halo of Buddha, one of many. Lotus-petal border, petals with strongly-marked double lobes beyond which central rib rising to point. A.T. 0051. Part of plain nimbus, of rayed halo with knob edge and of lotus-petal border. Light red clay. $3\frac{3}{8}'' \times 2\frac{5}{16}''$.

From same or similar mould: A.T. 0029; i. 0016, 0019, 0061, 0062; ii. 009, 0036; iii. 007, 008; iv. 0019, 0085, 0087, 00118, 00158; v. 009, 0058, 0076. Cf. (larger scale) A.T. i. 0017, (smaller) A.T. i. 00125.

A.T. 0054. Stucco relief fr. of perpendicular sharply ridged drapery fold. Light red clay. $3\frac{7}{8}'' \times 2\frac{3}{4}''$.

A.T. 0056. Stucco relief fr. of human face; R. eye, brow, and part of hair and bridge of nose. Treatment very flat, the whole eye being in projection. Eyebrow is raised thin line. Hair twisted rope-wise along edge of brow, moulded separately. Light red clay, grey in section. $2'' \times 1\frac{3}{4}''$.

A.T. 0057. Stucco relief fr. of plaited necklet; cf. A.T. iii. 0021. Reddish-drab clay. $3'' \times \frac{15}{16}''$.

A.T. 0059. Stucco relief fr. Spiral curl of hair. Drab clay. Diam. $\frac{11}{16}''$.

***A.T. 0060. Stucco relief fr.,** flower, one of many. Flower has round central boss and eight pointed petals with V-shaped longitudinal depression, diam. $1\frac{1}{2}''$; they were affixed in rows on flat background. Well-levigated light red clay with traces of slip; flower centres were painted light yellow. A.T. 0060, diam. $1\frac{1}{2}''$.

From same mould: A.T. i. 0020, 00121; ii. 0055; iv. 0023. a, b, 00153; v. 0045, 0066. Similar but from another mould, having diamond-shaped depression in each petal: A.T. i. 0021; ii. 0030; iii. 0040, 0041; iv. 0022. a–o, 00154. a, b; these similarly arranged in rows. Cf. from larger mould A.T. i. 0076. a, b; iii. 009. For similar flowers in different arrangement see A.T. ii. 0056, v. 0065. Cf. also A.T. i. 0012, and A.T. iii. 0080.

***A.T. 0063. Stucco relief fr.** of drapery; one of many similar but not from same mould. Folds curved; each rising to central ridge and distinguished from those on either side of it by deep incised line. Well-levigated light red clay, covered with thin white limewash on which remain traces either of gold-leaf or of dark red paint. Several pieces show behind impress of reeds used in wall-facing. A.T. 0063, $2\frac{1}{4}'' \times 1\frac{5}{8}''$.

Similar pieces: A.T. 0064. a–c, 0086. a–f; i. 0071. a, b, 00111. a–d; iii. 0027, 0028, 0048, 0055. a–d; iv. 00136, 00137, 00138, 00139.

A.T. 0064. a–c. Stucco relief frs. of drapery with curved folds. Hard light red clay with distinct traces of gold-leaf. See A.T. 0063. (*a*) $2\frac{5}{8}'' \times 1\frac{1}{4}''$; (*b*) $2'' \times 1\frac{3}{16}''$; (*c*) $1\frac{7}{16}'' \times \frac{3}{4}''$.

A.T. 0065. Stucco relief fr. End of stalk, with two lobes. Reddish mud-coloured clay. Cf. A.T. ii. 007 (but smaller). $1\frac{3}{16}'' \times 1''$.

A.T. 0071. Stucco relief fr. Central L. part of face of demon with wide nostrils; flat short bridge of nose; open mouth. Upper part of face was probably as A.T. iv. 009. Hard red clay covered with yellowish-white slip. $2\frac{1}{4}'' \times 2''$. Pl. IX.

***A.T. 0072. Stucco relief fr.** L. side of small capital orn. with rich acanthus-like foliage. Necking is plain torus. Similar pieces A.T. i. 0093, v. 0024. A.T. 0072, brick-red clay, drab wash. $3'' \times 3''$. Pl. IX.

A.T. 0075. Stucco relief fr., seated Buddha, with halo and fr. of lotus-leaf edging. Resembling A.T. 0028, but with feet tucked under drapery. Same mould as A.T. 0076. Red clay. $3\frac{7}{8}'' \times 2\frac{7}{8}''$.

A.T. 0076. Stucco relief fr., seated Buddha, with veiled feet, from same mould as A.T. 0075. Most of halo and vesica lost. Red clay. $3\frac{3}{8}'' \times 2\frac{1}{4}''$.

***A.T. 0077. Stucco relief fr.,** head of Buddha. Eyes nearly closed, slightly aslant; ears elongated. Cf. A.T. 0025. a. Larger scale. Bright red clay. $2'' \times 1\frac{1}{2}''$.

From same mould: A.T. ii. 0027, 0044; iv. 0018, 0071, 0072, 00116; v. 0011, 0048, 0054.

A.T. 0086. a–f. Stucco relief frs. of drapery; b, f have traces of gilding. See A. T. 0063. Light red clay. (*a*) $3\frac{7}{8}'' \times 2''$; (*b*) $2\frac{1}{2}'' \times 2\frac{3}{16}''$; (*c*) $2\frac{1}{4}'' \times 1\frac{1}{2}''$; (*d*) $3\frac{1}{2}'' \times \frac{3}{4}''$; (*e*) $2'' \times 1\frac{1}{8}''$; (*f*) $1\frac{1}{8}'' \times \frac{15}{16}''$.

***A.T. 0087. Stucco relief fr.** One of many, representing topknot of head-dress. From a heavy jewelled band (A.T. iv. 0096) rose a pleated linen crest curving over on either side and reaching down to band again. Behind flat nimbus with Vandyke pattern enclosed by fillet; crescents divided by balls affixed to rim (A.T. v. 0093). Cf. A.T. v. 0050. A.T. 0087, top of topknot, halo, and part of crescents. Red clay. $2\frac{1}{4}'' \times 2\frac{3}{4}''$.

From same mould: A.T. 0088; i. 0025, 0026, 0046, 00112; ii. 0010; iv. 0090, 0096 (Pl. VIII), 00100;

v. 0019, 0053, 0087. Similar but from a slightly smaller mould: A.T. i. 0066, 00113; iv. 00140, 00141; similar, from other moulds: A.T. ii. 0024; v. 0021.

A.T. 0090. Stucco relief fr. Ball pattern edge, field divided by flat fillet; in compartments leaf orn. See A.T. i. 0027 and A.T. 0096. Reddish mud-coloured clay. $1\frac{1}{2}'' \times 1\frac{1}{16}''$.

A.T. 0091. Stucco relief fr. Upper part of triangle; the moulded edges continue outwards, forming pair of volutes. Cf. A.T. ii. 0053, and perhaps A.T. 0087. Reddish-drab clay. $2\frac{1}{4}'' \times 2\frac{1}{4}''$.

A.T. 0095. Stucco relief fr. of jewelled band; edges of minute chevron pattern on raised fillet; field has two jewels, sq. and oval, high relief. One end complete. Light red clay. $2'' \times 1\frac{5}{16}''$. Pl. IX.

A.T. 0098. Stucco relief fr. of open lotus-bloom, saucer-shaped. High central boss, petals in low relief. Drab clay. Diam. $2\frac{7}{8}''$.

A.T. 00100. a–c. Stucco relief frs. of striated zigzag border of drapery (?), gradually diminishing in size. Mud-coloured clay. (*a*) $3'' \times 1\frac{1}{4}''$; (*b*) $1\frac{3}{4}'' \times 1\frac{1}{4}''$.

A.T. 00101. Stucco relief fr. Outside face orn. with two incised lines converging towards end. Between are diagonal incised strokes. Brick-red clay. $2'' \times 1\frac{3}{8}''$.

A.T. 00102. Stucco relief fr. of large lotus petal, probably from edge of plaque. The point of leaf, which is angular and not rounded, is noticeable. Central lobes in high relief. Cf. A.T. 0051. Mud-coloured clay. $2\frac{3}{8}'' \times 1\frac{5}{16}''$.

A.T. 00103. Stucco relief fr., with two half-round mouldings in vertical section and curved horizontally; possibly part of bracelet from human arm. Bright red clay with creamy slip. $\frac{7}{8}'' \times 1\frac{1}{2}''$.

A.T. 00104. Stucco relief fr. of drapery; heavy loop from R. breast; folds marked by incised lines. Hard red clay, creamy slip. $2\frac{1}{4}'' \times 3\frac{1}{4}''$.

A.T. 00108. Stucco relief fr. of drapery, prob. from standing Buddha; folds rendered by parallel grooves. Reddish-drab clay. $1\frac{1}{4}'' \times 1\frac{7}{8}''$.

***A.T. 00109. a, b. Stucco relief frs.** Two tightly coiled spiral curls of hair; lock marked by three grooves rises to point at centre. Cf. M. II. 006 for head wearing similar ringlets; also *Anc. Khotan*, Pl. LXXXIV, R. LXXIV. I. Drab clay. Diam. $1\frac{3}{16}''$.

From same mould: A.T. 00110; i. 0034, 0035; v. 0028, 0096; cf. A.T. 00111.

A. T. 00114. Stucco relief fr. of necklace, twisted plain and Vandyke strands. Red clay, creamy wash. $2'' \times \frac{1}{2}''$.

A.T. 00115. Nine beads; flat circular, tabloid, diam. $\frac{9}{16}''$, olive-green glass; rough cube with faceted angles, light green glass; small spheroid, translucent light blue glass; flattened ring-bead, dark blue glass; spheroid, ruby glass; flattened angular ring, light blue opaque paste; spheroid, dark blue translucent glass; ring-bead, light green opaque glass; slender ring diam. $\frac{7}{16}''$, white jade.

A.T. 00116. a–c. Glass beads: (*a*) Long barrel-shaped; agate glass, half brown, half white; $1\frac{3}{4}''$ long. (*b*) Fr. of lentoid; brown glass decorated with opaque white paste slip. (*c*) Fr. of discoid; polychrome eye in red, light and dark blue, yellow and green concentric rings.

A.T. 00117. a–g. Glass frs. (*a*) Resembling nail-head, light green glass; length $1''$. (*b*) Straight stem and fr. of base of vessel resembling wine-glass (?), light amber colour. H. $\frac{7}{8}''$. (*c*) Curved fr. of handle (?), twisted rod, white glass; length $1\frac{3}{8}''$. (*d*) Similar, light amber-coloured glass; length $\frac{5}{8}''$. (*e*) Fr. from flat rim (?) of vessel; light green glass. $\frac{5}{8}'' \times \frac{3}{8}''$. (*f*) Fr., very thin with rolled rim. Deep blue border, centre clear white. $\frac{9}{16}'' \times \frac{7}{16}''$. (*g*) Fr. white glass, with traces of etched design; greater part of surface rubbed down leaving panel in relief whereon intricate pattern. $\frac{15}{16}'' \times \frac{1}{2}''$.

A.T. 00118. Three frs. of jade rings; cf. A.T. 00115. Diam. *c.* $\frac{13}{16}''$.

A.T. 00119. Bone stamp, flat, circular. *Obv.* a running stag within cable border. *Rev.* concentric rings with radial points, probably flower having central knob and double corolla, within cable border. Pierced edgeways. Diam. $\frac{15}{16}''$; thickness $\frac{1}{4}''$.

A.T. 00120. Bronze frs. (*a*) Bezel of finger-ring, stone missing. (*b*) Nail with nearly hemispherical head. (*c*) Wire, one end pointed $2\frac{1}{2}''$ long. Also several shapeless frs.

A.T. 00122. Frs. of frescoes. Brown lines on light blue or white ground; apparently wing-feathers in outline. From A.T. i, A.T. iii, A.T. iv.

A.T. 00124. a–f. Miscell. bronze frs., etc., found near foot of W. wall. (*a*) Three frs. of Chin. coins, corroded, uninscribed. (*b*) Bronze arrowhead, corroded; two of the barbs broken off. Length $1\frac{1}{16}$. (*c*) Circular bronze orn., as Khot. 01. w. Diam. $\frac{1}{2}''$. (*d*) Fr. of mother-of-pearl. Gr. M. $\frac{1}{2}''$. (*e*) $\frac{1}{3}$ of spherical bead of red cornelian. (*f*) Spherical lead pellet. Diam. $\frac{3}{16}''$.

A.T. i. 006. Stucco fr. Two fingers (3rd and 4th) of R. hand. Under bend of fingers is circular hole, prob. for reed core. From same mould as A.T. iii. 0062. Hard light red clay. $2\frac{1}{2}'' \times 1\frac{1}{16}''$.

A.T. i. 007. Stucco relief fr. Human R. ear, long and rather flat. Hard mud-coloured clay with white slip. $2\frac{9}{16}'' \times 1\frac{1}{16}''$.

A.T. i. 008. Stucco relief fr. Human R. ear, rather thick and fleshy in modelling. Hard light red clay unevenly burned. $2\frac{7}{16}'' \times 1\frac{7}{16}''$.

A.T. i. 009. Stucco relief fr. of L. ear. Lower part lost. Possibly pair to A.T. i. 008. Hard dull reddish clay, mud-coloured in section. $2\frac{1}{8}'' \times 1\frac{3}{8}''$.

A.T. i. 0010. Stucco relief fr. of human finger from middle to tip. Light dull red clay. 2″ × 1⅜″.

***A.T. i. 0012. Stucco relief fr.** Flower, with central boss and seven rounded petals with pear-shaped depression; rising from foliage with flat base and two leaves which curl over to either side and form volutes below flower. Total height (from frs.) 3¼″. Well-levigated clay with traces of creamy wash; flower and foliage moulded separately A.T. i. 0012, base broken off. 1$\frac{15}{16}$″ × 1$\frac{3}{16}$″. Pl. VIII.

From same mould: (*a*) Flowers, A.T. iii. 0057, iv. 00151; (*b*) Stalks, A.T. 0046; i. 0040, 00118; ii. 006; iv. 0093, 00105, 00150, 00155. a, b. For similar design on much larger scale see A.T. iii. 0080. A similar round-petalled flower apparently was set on a stalk having a narrow base bound round, and ending above in two lobes, i.e. leaves inturned; cf. A.T. 0035, 0099; ii. 0057; iv. 0094; v. 0059.

***A.T. i. 0017. Stucco relief fr.** Large lotus petal from border of halo (cf. A.T. v. 0029). Two central lobes and edge of petal in high relief. Central rib rises to point. Apparently there were two overlapping rows of similar petals. Light red clay. 1$\frac{7}{16}$″ × 1⅞″.

From same mould: A.T. i. 0018; ii. 005; iv. 0088, 0089; v. 0012.

A.T. i. 0022. Stucco relief fr.; elliptical jewel orn., central stone almost rectangular, with plain band and bead border. Drab clay. ⅞″ × ¾″.

A.T. i. 0028. Stucco relief fr. of drapery, hanging in flat vertical folds like centre of A.T. iv. 0037. Light red clay. 2½″ × 2¾″.

A.T. i. 0029. Stucco relief fr. of drapery; zigzag fold emphasized by incised line; rough. Light red clay. 1⅝″ × 2¼″.

***A.T. i. 0030. Stucco relief fr.** of hair; one of many similar but not from same mould. The locks, differing in size according to position are represented by bands of crescents in low relief, alternate bands being reversed; crescents relieved by incised lines parallel with their edges, their ends sometimes joining so as to form S curves. Each mould seems to have produced a strip of two bands, 2″ wide and of uncertain length. The frs. are of red or drab clay with traces of white limewash or slip. Clay well levigated; used sparingly so that appliqué band might be as thin as possible. A.T. i. 0030, 2″ × 2″.

Also A.T. i. 0031. a, b, 0057. a, b, 00104, 00105, 00106; ii. 0015, 0016, 0017, 0018, 0019; iii. 0015, 0016, 0017, 0038, 0045, 0072, 0073; iv. 0038, 0039. a, b, 0040, 0043, 0065, 0076, 00133, 00134; v. 0036, 0043, 0055, 0085.

***A.T. i. 0032. Stucco relief fr.** Crescent-shaped lock of hair with five rounded ribs rising to centre. Mud-coloured clay. 2¼″ × 3¼″.

From same mould: A.T. i. 0045; iv. 0043. Cf. A.T. i. 0030 (smaller), and *Anc. Khotan*, Pl. LXXXII, R. ii. 1.

A.T. i. 0033. Stucco relief fr.; striated bands at right angles and curved lotus petal (?). Light red clay. 1$\frac{3}{16}$″ × 1⅛″.

A.T. i. 0037. Stucco relief fr. Flat lozenge-shaped orn. with deeply cut line running parallel and close to edges. Lower corner lost. Drab clay. 1⅜″ × 1$\frac{3}{16}$″.

A.T. i. 0038. a, b. Stucco relief frs. of half-round moulding with twisted Vandyke bands (cf. A.T. ii. 0022) and narrow fillets. Red clay. (*a*) 1½″ × ⅜″; (*b*) 1⅜″ × ¼″.

A.T. i. 0039. Stucco fr. Upper part of 'corkscrew' curl, as A.T. iii. 0026. Hard, light red clay. 2″.

A.T. i. 0041. Stucco fr. of bracelet (?), consisting of three half-round rings. Appliqué. Hard mud-coloured clay. 1$\frac{9}{16}$″ × 1½″.

A.T. i. 0042. Stucco relief fr. of drapery, looped fold; subsidiary folds indicated by parallel lines incised. Red clay. 1¾″ × ⅞″.

***A.T. i. 0044. Stucco relief fr.**, flame pattern, one of many, worked in high relief, each flame separately rendered as wavy tongue with seven ribs decreasing to five towards tip. Length *c.* 8½″. A.T. i. 0044. 4¾″ × 2¾″.

From same or similar mould: A.T. 0080, 0081; i. 0063, 0091; iii. 0019, 0042, 0056, 0060; iv. 0042, 0060, 0061; v. 0046, 0078, 0079.

A.T. i. 0052. Stucco relief fr. Human L. ear coarsely modelled; lower part missing. Light red clay, blackish in section; white slip. 2⅜″ × 1$\frac{9}{16}$″.

A.T. i. 0053. Stucco relief fr. Upper part of human ear (? R.). Hard red clay, prob. originally gilded, as globules of melted gold still adhere. ⅞″ × 1½″.

A.T. i. 0058. Stucco relief fr. Human nose similar to A.T. iv. 0077. Hard red clay, surface decayed. 1⅞″ × 1$\frac{15}{16}$″.

A.T. i. 0059. Stucco relief fr. Medallion from vesica with central rosette. See A.T. 0020. 3½″ × 3″. Pl. VIII.

A.T. i. 0065. Stucco relief fr. of five-leaved palmette; pointed leaves with incised ribs. Red clay. 1¾″ × 2″.

A.T. i. 0067. Stucco relief fr., slightly convex, divided by incised lines into series of lozenges in each of which is large stamped circle. Red clay, light wash. 2$\frac{5}{16}$″ × 1⅞″.

A.T. i. 0070. Stucco relief fr. of U-shaped band, square in section, on flat ground; perhaps lobe of human ear. Reddish-drab clay, slatey grey in section. Cf. A.T. ii. 0050. 3½″ × 1½″.

***A.T. i. 0075. Stucco relief fr.** of flame for appliqué work. Each flame moulded separately in low relief, as continuous corkscrew curve marked with boldly incised parallel lines; length as given by fragments not less than 4½″. A.T. i. 0075, flakey light red clay with traces of white slip. 2$\frac{15}{16}$″ × ⅝″.

From same mould: A.T. i. 00107. a, b; ii. 0025; iv. 0047, 0092. a, 00103, 00135; similar frs. but from different moulds: A.T. 0039, 0040; i. 0036, 00108, 00110; ii. 0023, 0052; iii. 0022; iv. 0046, 00101; v. 0027, 0086.

A.T. i. 0076. a, b. Stucco relief frs. Two eight-petalled flowers with central boss. Petals pointed, with incised central rib. From same mould as A.T. iii. 009. Light red clay. Cf. A.T. 0060. (*a*) $1\frac{7}{8}'' \times 1\frac{3}{4}''$; (*b*) $1\frac{3}{4}'' \times 2\frac{5}{16}''$.

A.T. i. 0077. Stucco relief. Base for statuette; quadrangular, with moulding of two sq. members at bottom and same inverted at top. On top hexagonal lotus base, diminishing, upper part missing. Cf. *Anc. Khotan*, i. Fig. 29. From same mould is A.T. v. 0067. Light red clay. $2\frac{1}{2}''$ high × $3''$ wide.

A.T. i. 0082. Stucco relief fr. of drapery, from L. groin and thigh of standing Buddha. Red clay. $4\frac{1}{2}'' \times 3\frac{1}{2}''$.

A.T. i. 0083. Stucco relief fr. of draped limb of a standing Buddha, folds rendered by parallel grooves; cf. A.T. i. 0082. Red clay; surface vitrified. $3'' \times 1\frac{3}{4}''$.

A.T. i. 0084. Stucco relief fr. of human face; all above R. eye and below mouth lost, and all to L. side of nose. Eye narrow and prominent; nose thin with flat nostrils; upper lip very short, with sharply cut outline. Red clay, traces of creamy wash. $4\frac{1}{8}'' \times 3\frac{3}{4}''$. Pl. IX.

A.T. i. 0085. Stucco relief fr. Large lotus petal curving over half-round ridge. Much stylized; central lobes of petal in high relief. Drab clay. $4\frac{1}{4}'' \times 2\frac{7}{8}''$.

A.T. i. 0086. Stucco relief fr. of drapery; series of vertical half-round folds, each scored down centre with single line, and forming strongly undulating edge. Reddish mud-coloured clay, white slip. $3\frac{3}{4}'' \times 3\frac{1}{4}''$.

***A.T. i. 0087. Stucco fr.** Human L. hand about one-third life-size; fingers doubled down upon their lower joint; thumb turned slightly inwards over first finger. Hard red clay with yellowish-white slip. Under bend of fingers is pierced hole. In scale and style this corresponds closely with the right hand, A.T. iii. 0062 and other frs., q. v. $2\frac{5}{8}'' \times 2\frac{3}{8}''$.

From the same mould are: A.T. 0082; iv. 0011, 00119, 00120.

***A.T. i. 0088. Stucco relief fr.** of seated Buddha. Background, head, R. arm, both hands and legs lost. In original, fig. has plain Uṣṇīṣa; nimbus plain; halo with ray border and fringe of lotus petals with deeply marked double lobes. Hands bare, folded on lap. Drapery rendered by closely-set parallel grooves. From large decorative halo, cf. *Anc. Khotan*, Pl. LXXXVII, R. 08.

From same mould: A.T. iv. 0017, 0053, 0054; v. 008, 0010, 0031, 0047, 0074.

A.T. i. 0089. a, b. Stucco relief frs. R. leg and L. foot of Buddha with lotus halo, of which part remains below and to R. of fig. in a. Cf. A.T. 0025. a. Light red clay. (*a*) $1\frac{5}{8}'' \times 2\frac{1}{2}''$; (*b*) $1\frac{7}{8}'' \times 2''$.

A.T. i. 0090. Stucco relief fr. L. arm and knee of seated Buddha. Cf. A.T. 0025. a. Red clay. $1\frac{7}{8}'' \times 1\frac{1}{8}''$.

A.T. i. 0098. Stucco relief fr. Human L. ear, lower lobe broken away. Reddish-drab clay, unevenly burned, blackish in section. Cream-coloured slip. $2\frac{5}{8}'' \times 1\frac{7}{8}''$.

A.T. i. 0099. Stucco relief fr. L. ear about life-size. Hard light red clay with cream-coloured slip. $2\frac{3}{8}'' \times 1\frac{1}{4}''$.

A.T. i. 00100. Stucco relief fr. Human L. ear. Drab mud-coloured clay with remains of white slip. $2\frac{1}{2}'' \times 1\frac{1}{2}''$.

A.T. i. 00101. Stucco relief fr. Top of human L. ear. Hard reddish clay. $1\frac{1}{2}'' \times \frac{7}{8}''$.

A.T. i. 00102. Stucco relief fr. Second and third fingers of R. hand (?). Hard dark mud-coloured clay. $2'' \times 1''$.

A.T. i. 00103. Stucco relief fr. L. arm of human fig., undraped, with single bracelet on wrist. Forearm drawn up so that hand nearly touches shoulder. Poor modelling. Hard red clay with thin cream-coloured slip. $2\frac{3}{4}'' \times 2''$.

A.T. i. 00109. Stucco fr. of small human head, with hair indicated by bands of crescent-shaped locks facing alternately to L. and R. Moulded in one piece. Light red clay. $2'' \times 1\frac{5}{8}''$.

A.T. i. 00114. Stucco relief fr. Crescent resting on top angle of triangle. Cf. *A.T. 0033. This fr. shows how upper part of design should be completed. Reddish mud-coloured clay. $3\frac{1}{4}'' \times 2\frac{1}{2}''$.

***A.T. i. 00115. Stucco relief fr.** Post of railing, moulded with narrow I-shaped coffers and part of rail. From similar mould A.T. iii. 0078; iv. 0045. Hard red clay. $2\frac{1}{8}'' \times 1\frac{1}{4}''$.

A.T. i. 00119. Stucco relief fr. of flower; parts of three petals only. Light red clay. $1\frac{3}{8}'' \times 1\frac{3}{4}''$.

A.T. i. 00120. Stucco relief fr. of five-leaved palmette. Narrow pointed leaves with incised ribs. Red clay. $1\frac{7}{8}'' \times 2\frac{5}{16}''$. Pl. IX.

***A.T. i. 00123. a, b. Stucco relief frs.** of flame orn. Dull reddish clay. (*a*) $1\frac{7}{8}'' \times 1\frac{5}{16}''$; (*b*) $1\frac{9}{16}'' \times 1''$. From similar mould: A.T. iii. 0024; iv. 0050, 00157; v. 0092.

A.T. i. 00124. Stucco relief fr. On L. plain curved border and deep-cut groove. Surface divided up diamond-wise by incised lines. In centre of each division a deep stamped hole. Cf. A.T. iii. 0018. Light red clay. $3'' \times 2\frac{1}{8}''$.

A.T. i. 00126. Stucco relief fr. Lotus leaf from border of plaque. Red clay with incrustations of burnt paint. $1\frac{1}{4}'' \times 1\frac{1}{8}''$.

A.T. i. 00127. Stucco relief fr., curved and ribbed like mouth of vase. Light red clay. $1\frac{1}{2}'' \times 1\frac{7}{8}''$.

A.T. i. 00128. Stucco relief fr. of drapery; heavy looped fold. Surface channelled, giving subsidiary folds, as A.T. v. 0022. Light red clay. $1\frac{5}{8}'' \times 2\frac{9}{16}''$.

A.T. i. 00130. Stucco relief fr. of drapery (?). Lower edge apparently undulating. Reddish-drab clay. $1'' \times 2\frac{3}{4}''$.

A.T. i. 00131. Pottery fr. Hard granular clay, full of calcined grit. On outside is thin white slip burned dark slate-grey in places. Inside also has slip on face, of dark to light smoky red. $1\frac{7}{8}'' \times 1\frac{5}{8}''$.

A.T. i. 00132. Frs. of gold leaf.

A.T. i. 00133. Glass fr., slightly convex; larger portion light greenish-grey, remainder dark bluish-green. Gr. M. $1''$; thickness $\frac{1}{16}''$.

A.T. ii. 1. Indeterminate terra-cotta fr., round in section. Length $1\frac{7}{8}''$.

A.T. ii. 2. Fr. of pottery vessel, with applied orn. imitating rope. Light red clay very finely finished. $2'' \times 1\frac{5}{8}''$.

A.T. ii. 0013. Stucco relief fr. of drapery, rough zigzag ridge in high relief. Brick-red clay. $4'' \times 2\frac{1}{4}''$.

A.T. ii. 0014. Stucco relief fr., belonging to, but not fitting, A.T. ii. 0013. Brick-red clay. $3'' \times 1\frac{1}{2}''$.

A.T. ii. 0020. Stucco relief fr. of large leaf-shaped design with plain border and inner field divided by curved line; above, plain lozenge pattern; below, ribbed lozenges. Technique not plastic, but gives effect of chip-carving in wood. Reddish-drab clay; traces of yellow slip. $3'' \times 2\frac{3}{4}''$. Pl. VIII.

A.T. ii. 0021. Stucco relief fr. of drapery with close rounded folds spreading out slightly flame-wise. Cf. A.T. v. 0022 (different scale). $2\frac{3}{4}'' \times 1\frac{3}{4}''$.

A. T. ii. 0022. Stucco relief fr. Chain; Vandyke band between two fillets. Red clay. Cf. A.T. iii. 0020. $2'' \times \frac{11}{16}''$.

A.T. ii. 0026. Stucco relief fr. of drapery. On L. raised ridge almost sq. in section. On R. looped folds in low relief; cf. A.T. iv. 0049. Light red clay unevenly burned. $2\frac{1}{4}'' \times 2\frac{1}{4}''$.

***A.T. ii. 0035. Stucco relief fr.** of fillet from Buddha fig., rendered by band with narrow horizontal folds giving zigzag ends. Light red clay. $1\frac{1}{4}'' \times 1''$.

From similar mould: A.T. iii. 0032, 0046; iv. 0081, 0082; v. 0081. Cf. *Anc. Khotan*, Pl. LXXXVII, R. lxxxiv. 1.

A.T. ii. 0041. Stucco relief fr. See *A.T. 0020. $3'' \times 1\frac{7}{8}''$. Pl. VIII.

A.T. ii. 0048. Stucco relief fr. Lower part of human face. Chin disproportionately long and heavy. Light red clay, with remains of creamy wash and of gilding on lips. $2\frac{1}{2}'' \times 2''$.

A.T. ii. 0050. Stucco relief fr. U-shaped band, square in section, on flat ground; perhaps lobe of human ear; cf. A.T. i. 0070. Reddish-drab clay. $2\frac{3}{8}'' \times 1''$.

A.T. ii. 0051. Stucco relief fr. Finger; poor modelling, no detail. Hard mud-coloured clay. Length $2\frac{5}{8}''$.

A.T. ii. 0053. Stucco relief fr. Upper part of triangle. The moulded edges continue outwards and form a pair of volutes. Cf. A.T. 0091, and perhaps A.T. 0087. Drab clay. $2\frac{1}{2}'' \times 2\frac{3}{8}''$.

A.T. ii. 0054. Stucco relief fr. of moulding, angular in section, with incised lines forming arrow-head pattern. Above, two half-round orns. L. end of fr. rounded, R. fractured. Mud-coloured clay. $3\frac{5}{8}'' \times 1''$.

A.T. ii. 0056. Stucco relief fr. Part of eight-petalled flower with central boss (cf. A.T. 0060) from which rises fr. of deeply incised palmette-like foliage; free rendering of design of A.T. i. 0012 q.v. Mud-coloured clay; surface of flower partly vitrified and with traces of gilding. $2\frac{5}{8}'' \times 2\frac{3}{8}''$. Pl. VIII.

A.T. ii. 0058. Stucco relief fr. Human toe. Poor modelling. Mud-coloured clay, white slip. $2\frac{7}{8}'' \times 1\frac{3}{16}''$.

A.T. iii. 001. Stucco fr. of human wrist (?), with portion of bracelet; edges half-round with twisted work of two strands between. Hard light red clay. $1\frac{7}{8}'' \times 1\frac{7}{8}''$.

A.T. iii. 006. Stucco relief fr. R. arm and leg of seated Buddha, hands covered with drapery. See A.T. 0027. Drab clay. $1\frac{3}{8}'' \times 1''$.

A.T. iii. 009. Stucco relief fr. Large eight-petalled flower with central boss. Petals pointed with incised central rib. Reddish mud-coloured clay. Cf. A.T. 0060. $2\frac{1}{2}''$ diam.

A.T. iii. 0012. Stucco relief fr. of crescent. Light red clay. See A.T. 0033. $1\frac{1}{8}'' \times 1\frac{3}{16}''$.

A.T. iii. 0014. Stucco relief fr. of triangle. Mud-coloured clay. See A.T. 0033. $\frac{7}{8}'' \times 1\frac{3}{4}''$.

A.T. iii. 0018. Stucco relief fr. Curved strip with convex surface, cut up diamond-wise by incised lines. In centre of each 'diamond' puncture made with thin triangular point. Mud-coloured clay. Cf. A.T. i. 00124. $2\frac{11}{16}'' \times 1\frac{3}{4}''$.

A.T. iii. 0020. Stucco relief fr. Chain; Vandyke band between two fillets. Hard greyish-yellow stucco. Cf. A.T. ii. 0022. $2'' \times \frac{11}{16}''$.

A.T. iii. 0021. Stucco relief fr. of plaited necklet. Cf. A.T. 0057. Light red clay. $1\frac{7}{16}'' \times \frac{5}{8}''$.

A.T. iii. 0023. Stucco relief fr. Back of upper part of human ear, front and lower part lost. Hard yellowish-red clay. $2'' \times 1\frac{1}{2}''$.

A.T. iii. 0025. Stucco relief fr. Curved closely-ribbed fold of drapery (?). Light red clay. $1\frac{3}{4}'' \times 1\frac{1}{4}''$.

A.T. iii. 0026. a, b. Stucco fr. Twisted 'corkscrew' lock of hair in the round and only slightly attached at back; point is turned upwards. Curls marked with deeply incised central line. Hard light red clay. Two frs. joined. $4''$. Pl. IX.

A.T. iii. 0029. Stucco relief fr. of drapery (?), forming sharp slightly curved folds. Ash-grey clay. $2\frac{1}{8}'' \times 2\frac{1}{16}''$.

A.T. iii. 0030. Stucco relief fr. Toe of human foot (?); no modelling or indication of nail. Line of fracture along lower R. edge. Hard light red clay. $2\frac{1}{8}'' \times 1\frac{1}{8}''$.

***A.T. iii. 0031. Stucco relief fr.** Hanging bunch of seeds broken from a flower. Mud-coloured clay. $1\frac{1}{8}'' \times \frac{7}{8}''$.
From same or similar mould are: A.T. iv. 0025, 00156; v. 0039 (Pl. VIII), 0060.

A.T. iii. 0033. Stucco relief fr. of drapery, with band of Vandyke ornament. $1\frac{1}{2}'' \times 1\frac{1}{16}''$.

***A.T. iii. 0035. Stucco relief fr.** of Buddha seated in middle of lotus flower. Only legs and bare folded hands remain. Drapery rendered by close parallel grooves with heavy zigzag border. From same mould: A.T. iii. 0059. Brick-red clay. $2\frac{3}{4}'' \times 4''$.

A.T. iii. 0038. Stucco relief fr. of front of head and brow of human fig. On rough core remain two rows of crescent-shaped curls below which is ridge. Hard light red clay. See A.T. i. 0030. $3\frac{3}{4}'' \times 2\frac{1}{2}''$.

A.T. iii. 0039. Stucco relief fr. Small human L. foot, flat and poorly modelled. Hard red clay, yellowish slip. $2\frac{13}{16}'' \times 1\frac{3}{8}''$.

A.T. iii. 0047. Stucco relief fr. of human ear. Moulding fair, but somewhat thick and fleshy. Hard light red clay with white slip. $2\frac{1}{4}'' \times 1\frac{3}{16}''$.

A.T. iii. 0055. a–d. Stucco relief frs. of drapery. Light red or mud-coloured clay, with traces of gilding. $1\frac{1}{2}''$ to $2\frac{1}{2}''$ in length.

A.T. iii. 0058. Stucco relief fr. Lower part of body of standing (?) Buddha. In front is upper part of small scale head with hair in volute-like curls (an attendant ?). Red clay. $3'' \times 3\frac{3}{8}''$.

A.T. iii. 0061. Stucco fr. Abdomen of female fig., nude save for girdle of which central flower alone remains. On either side are remains of drapery which hung in a loop across pudenda. Hollow cast. Finely levigated red clay, hard burned, with thin cream-coloured slip. $2\frac{3}{4}'' \times 3\frac{7}{8}''$.

***A.T. iii. 0062. Stucco fr.** Portion of R. arm with wrist and hand. Cast on core of a stick enveloped in clay. Light reddish-drab clay with traces of white slip. $6\frac{1}{2}'' \times 2\frac{1}{4}''$.
From the same mould are: A.T. i. 006; iii. 0063; iv. 0052, 00131; v. 0072 (Pl. VIII). Cf. A.T. i. 0087.

A.T. iii. 0065. Stucco relief fr. Upper part of human L. ear, over top of which hang short flat tufts of hair. Behind ear, much larger flat tress of hair with deeply incised lines. Hard light red clay showing marks of burning behind. $3\frac{1}{2}'' \times 2\frac{1}{8}''$.

A.T. iii. 0066. Stucco relief fr. Top of human R. ear. Hard light red clay, unevenly burned. $1\frac{1}{2}'' \times 1\frac{3}{8}''$.

A.T. iii. 0067. Stucco relief fr. Back ridge of human L. ear (?). Hard reddish clay. $3'' \times 1\frac{1}{8}''$.

A.T. iii. 0068. Stucco relief fr. End of finger or toe with nail indicated. Hard reddish-grey clay. $1\frac{5}{8}'' \times \frac{7}{8}''$.

A.T. iii. 0069. Stucco relief fr. End of toe (?), flat and almost square in section. Coarse flaky red clay. $2\frac{7}{8}'' \times 1\frac{1}{4}''$.

A.T. iii. 0070. Stucco relief fr. Tip of finger. Hard drab clay with creamy slip. $1\frac{1}{4}'' \times \frac{3}{4}''$.

A.T. iii. 0071. Stucco relief fr. L. arm of adoring fig. (?), undraped, slightly bent upwards at elbow. Hand is open to front and at angle with forearm. Hard red clay with cream-coloured slip. $3'' \times 1\frac{5}{16}''$.

A.T. iii. 0074. Stucco fr. R. leg bent at knee, possibly from adoring fig., the other knee being perhaps placed on the ground. Drapery falls to ground and folds are indicated by almost parallel incised lines. Moulded hollow in several pieces, and mostly filled up when stuck together. Finely levigated red clay, burned evenly throughout. Traces of thin white slip. $4\frac{1}{4}'' \times 3\frac{7}{8}''$.

A.T. iii. 0075. Stucco relief fr. of hair, with short applied tresses ending in curls. Hard dark grey clay. $1\frac{1}{2}'' \times 1\frac{1}{2}''$.

***A.T. iii. 0080. Stucco relief fr.** Quatrefoil flower with central boss and rounded petals depressed in centre, resting on voluted leaves; from it rises fr. of stalk of second flower. Cf. A.T. v. 0037 and i. 0012. Drab clay. $4\frac{1}{8}'' \times 3\frac{1}{16}''$.
From same mould are: A.T. v. 0013, 0038.

A.T. iii. 0081. Stucco relief fr. Vertical face curves over to front. In curve is cone-shaped object with sunk panels smaller than, but resembling, A.T. v. 0026, supporting fan-like object; perhaps jewel and plume from head-dress. Light red clay, creamy wash. $1\frac{7}{8}'' \times 2\frac{3}{8}''$.

A.T. iii. 0082. Stucco relief fr. Muzzle of bull (?), broken off a short distance behind nostrils and mouth. Bold but coarse work. Red clay, creamy wash. $3\frac{1}{2}'' \times 3\frac{1}{2}''$ approximate.

A.T. iii. 0083. Stucco relief fr. of drapery. Vertical face, folds marked by sharply incised lines. Red clay. $2\frac{1}{2}'' \times 1\frac{1}{16}''$.

A.T. iii. 0084. Stucco relief fr. of drapery showing end of vertical flattened folds; cf. A.T. iv. 0037. Reddish-drab clay. $2'' \times 1\frac{7}{8}''$.

A.T. iii. 0089. Stucco relief plaque of Buddha seated in centre with hands covered, with border of lotus leaves. Portion of border lost at lower L. part; otherwise perfect. See A.T. i. 0088. Red clay. $4\frac{3}{4}'' \times 4\frac{3}{4}''$. Pl. VIII.

A.T. iv. 1. Fr. of hand-made pottery jar with five bands of scratched orn.; 1 and 3 have saw-tooth orn., 2 and 4 comb-drawn festoons. Lower bands perished. Fr. of horizontal loop handle. Flat lip with oblique rows of punctures. Ill-levigated drab clay. $3\frac{1}{2}'' \times 3\frac{3}{4}''$. Pl. IV.

A.T. iv. 2. Fr. of hand-made pottery vessel, with two bands of comb-drawn festoons; between these a raised ridge of clay cut obliquely by intersecting lines. Cf. A.T. 006. Ill-levigated reddish-drab clay. $3'' \times 3''$. Pl. IV.

A.T. iv. 3. Fr. of hand-made pottery vessel, with band of scratched 'saw-tooth' orn. 3" × 2".

A.T. iv. 009. Stucco relief fr. R. side of brow, and R. eye of demon. The eye projects strongly, the lid jutting almost horizontally and beyond the eyebrow. The eyebrows are rounded ridges united over nose by inverted V-shaped furrow with abrupt depression on either side of apex. Slight ridge of flesh over spring of nose which is abnormally distant from the inner corner of eye. Light red clay. 2⅜" × 2⅛".

A.T. iv. 0012. Stucco relief fr. Human finger. Nail apparently painted dark red. Hard light red clay. 2⅛" × ⅞".

A.T. iv. 0020. Stucco relief fr. of circular plaque. Red clay. Prob. part of A.T. v. 0050. 2½" × 1⅝".

A.T. iv. 0021. Stucco relief fr., slightly convex with horizontal string of bead orn. Light red clay, creamy slip. 2⅜" × 1¾".

***A.T. iv. 0024. Stucco relief fr.** Quatrefoil with large round centre and angular petals, the whole practically square. Light red clay. 1" × 1". From same mould: A.T. iv. 0095, 00152.

A.T. iv. 0032. Stucco relief fr. Above, projecting fillet 1" wide; below to R., triangle with bead border enclosing half-rosette, two leaves, and three balls (cf. A.T. iv. 0099); to L., half of open lotus, boldly conventionalized with deep incisions for petal markings. Brick-red clay. 3½" × 4½". Pl. IX.

A.T. iv. 0034. Stucco relief fr. of triangle with bead pattern edge; inside is small trace of beaded circular orn., single stud in angle. Mud-coloured clay. 2¼" × 1⅛".

A.T. iv. 0037. Stucco relief fr. of drapery. In centre broad flat perpendicular fold; on either side series of looped folds. Cf. A.T. i. 0028. Light red clay, grey in section. 2⅝" × 4".

A.T. iv. 0041. Stucco relief fr. of cord tassel (?). Two cords with central incision and knotted ends. Reddish-drab clay, surface decayed. 2 9/16" × 1⅝".

A.T. iv. 0044. Stucco relief fr. of drapery. Style of A.T. v. 0022, but coarser. Mud-coloured clay. 1¼" × 1½".

A.T. iv. 0048. Stucco relief fr. Circular orn. having convex surface; within plain ring border. Mud-coloured clay, white wash. 1¼" diam.

A.T. iv. 0049. Stucco relief fr. of drapery, border falling in heavy zigzag folds. Cf. A.T. ii. 0026. Light red clay. 2⅜" × 2".

A.T. iv. 0051. Stucco relief fr. of finger or toe (?); unmodelled and no nail indicated. Hard light red clay. Length 1½".

A.T. iv. 0064. Stucco relief fr. Human finger, long and thin; no modelling. Hard light reddish clay. 3½" × ¾".

A.T. iv. 0066. Stucco relief fr. Youthful female head turned very slightly to R. Hair long and wavy and divided over forehead, mostly lost. Eyes narrow and level with general surface of face, cheeks and chin very heavy and fleshy. Round neck is a plain torque. Ears are very long, with ornaments in lobes. Face, neck, and hair moulded separately. Hard light red clay. 2¾" × 2¾". Pl. IX.

A.T. iv. 0077. Stucco relief fr. Lower part of human nose. Light red clay, core grey. 1 9/16" × 1 5/16".

A.T. iv. 0086. Stucco relief fr. Inner border of lotus-fringed plaque, as in A.T. v. 008. Drab clay. 2½" × 1⅜".

A.T. iv. 0091. Stucco relief fr. Curved double band decorated with bead orn. End curled upwards and over to R. Cf. A.T. 0043. Light red clay. 1 13/16" × 1".

A.T. iv. 0096. Stucco relief fr. Topknot with nimbus. See *A.T. 0087. Red clay. 3¼" × 2⅝". Pl. VIII.

A.T. iv. 0099. Stucco relief fr. Triangle, complete. See *A.T. 0033. Buff clay. 3" × 4½". Pl. VIII.

A.T. iv. 00102. Stucco fr. of hair; locks indicated by irregular bands of stamped crescent-shaped curves. Hard red clay. 1⅝" × 1".

A.T. iv. 00117. Stucco relief fr. Foot of seated Buddha against lotus leaf; from border of plaque. Light red clay. 2" × 1¼".

A.T. iv. 00127. Stucco relief fr. of human head with nose, mouth, chin, and part of L. cheek. Modelling good but conventional (cf. A.T. v. 001), with heavy chin sloping away into throat. Light red clay with impress of reed core. 2¼" × 1¾".

A.T. iv. 00128. Stucco relief fr. R. eye with part of brow of human fig. Eye is narrow, half-closed and in projection; brow mere ridge between two planes of forehead and space below brow. Red clay with traces of creamy wash. 2⅜" × 2⅝".

A.T. iv. 00132. Stucco fr. Part of wrist over life-size with single bracelet. Hard mud-coloured clay; the core burned to a darker colour. 3⅜" × 1¾".

A.T. iv. 00136. Stucco relief fr. of drapery. Reddish-drab clay with small globules of melted gold on surface. See A.T. 0063. 4⅛" × 1⅝".

A.T. iv. 00146. Stucco relief fr. Lozenge-shaped orn., on flat field. Half-round moulded border. Light red clay. 1⅛" × 1¾".

A.T. iv. 00148. Stucco relief fr. Two diminishing bands of Vandyke, divided by tapering central rib. Light red clay. 1⅞" × 1½".

A.T. iv. 00159. Stucco relief fr. of drapery, slightly fan-shaped; folds ending in elaborate zigzagged points. Mud-coloured clay. 2¾" × 2⅝".

A.T. iv. 00160. Stucco relief fr. of drapery; vertical folds incised; edge undulating. Reddish mud-coloured clay. 3⅛" × 1¾".

A.T. iv. 00161. Stucco relief fr., roughly incised, with smooth rounded end. Second piece projects by side; perhaps muzzle and paw of monkey. Light red clay. $1\frac{7}{8}'' \times 2\frac{7}{8}''$.

A.T. iv. 00162. Stucco relief fr. of drapery, with slightly undulating rounded folds; rough. Reddish mud-coloured clay. $3\frac{1}{2}'' \times 2\frac{1}{8}''$.

A.T. iv. 00164. Terra-cotta fr. Knee of squatting monkey; fur indicated by incised dashes. Light red clay. $1\frac{3}{8}'' \times 1\frac{1}{8}''$. Pl. IX.

A.T. iv. 00165. Stucco relief fr. Roll of clay marked with central groove, bent into loop. Drab clay. $2\frac{3}{4}'' \times 2''$.

A.T. v. 1. Terra-cotta fr. Leg from ankle to middle of thigh; shows conventional fur markings; possibly part of monkey riding. $2'' \times 1\frac{1}{2}''$. Pl. IX.

A.T. v. 2. Terra-cotta fig. of monkey, upper part of. R. arm raised above level of shoulder, but broken above elbow. L. arm, crown of head, and all below breast lost. Features deeply incised after moulding; hair of body marked by rows of incisions made with thin wedge-shaped tool. Fine clay; surface very smooth. H. $3\frac{1}{4}''$. Pl. IX.

A.T. v. 001. Stucco relief fr. of human face. Breakage extends across bridge of nose, thence close to L. nostril and corner of mouth below chin and upwards well to R. of mouth and nose. Nose is *retroussé*; nostrils, lips, and corners of mouth with chin very carefully modelled. Surface finely preserved. Red clay with remains of white slip. $2\frac{5}{8}'' \times 1\frac{7}{8}''$.

A.T. v. 002. Stucco relief fr. of human face, nose and mouth only. Very careful modelling; nose thin-edged and very slightly curved along its whole length, not at bridge. Red clay with remains of white slip. $2'' \times 1\frac{1}{16}''$.

A.T. v. 003. Stucco relief fr. Small R. hand with three bracelets on wrist; fingers are closed over palm holding something which passes down inside arm. Prob. from a Buddha holding end of drapery. Hollow cast, built up on wooden core. Well-levigated light red clay, burned hard and uniformly. $2\frac{3}{16}'' \times 1\frac{1}{4}''$.

***A.T. v. 004. Stucco relief fr.** Human R. ear about life-size. Hard light red clay. $3\frac{1}{2}'' \times 1\frac{3}{4}''$. From same mould: A.T. v. 0084.

A.T. v. 0017. a, b. Stucco relief frs.; crescents. See *A.T. 0033. $2\frac{7}{8}'' \times 2\frac{3}{16}''$. Pl. VIII.

A.T. v. 0020. Stucco relief fr. L. half of pear-shaped medallion. Vandyke edging between two narrow fillets, with single leaf-shaped orn. and ball inside. Mud-coloured clay, unevenly burned. $2\frac{9}{16}'' \times 1\frac{7}{16}''$.

A.T. v. 0022. Stucco relief fr. of flowing, finely folded drapery, on fr. of smooth background. Folds end in zig-zags. Reddish-drab clay. $2\frac{3}{4}'' \times 1\frac{7}{8}''$.

A.T. v. 0023. Stucco relief fr., like *Takhti* handle; on broader part linear orn. like arrowhead, with subsidiary barbs. Reddish-drab clay. $3\frac{1}{4}'' \times 2\frac{1}{2}''$.

A.T. v. 0024. Stucco relief fr., with acanthus-like foliage. Cf. A.T. 0072. Drab clay. $2'' \times 2''$.

A.T. v. 0025. Stucco relief fr. of grotesque face of demon. Upper lip and portion of L. cheek only preserved. Upper lip projects in snarl, showing teeth; over this is moustache which crosses projecting cheek-bone. Very slightly above is part of lower eyelid, showing that nose and whole face were grotesquely short. Drab clay. $2\frac{3}{4}'' \times 1\frac{7}{8}''$.

A.T. v. 0026. Stucco relief fr. Jewel from head-dress (?); below is sq. engaged capital; on this rests three-sided tapering frame-work with four sq. openings in each side. Light red clay, surface decayed. $2\frac{1}{2}'' \times 1\frac{1}{16}''$.

A.T. v. 0029. Stucco relief fr. Lower part of seated Buddha in centre of lotus flower. R. side of fr. broken away. Hands bare, drapery rendered by close parallel grooves, with zigzag borders. Light red clay. $4'' \times 3''$.

A.T. v. 0032. Stucco relief fr. Hard reddish-grey stucco. See *A.T. 0020. $4\frac{1}{8}'' \times 3''$. Pl. VIII.

A.T. v. 0034. Stucco fr. Core of lower arm of fig., with remains of overlaid drapery confined by band having chevron orn. Coarse red clay. Length $4\frac{1}{2}'' \times 1\frac{3}{4}''$.

A.T. v. 0035. Stucco fr. L. hand of fig. about half life-size, palm to front; finger closed from lower joint upon upper part of palm. Round wrist is fr. of plain bracelet. Nails clearly indicated, triangular in shape and cut square; very little modelling. Arm hollow cast; hand flat and afterwards roughly backed. Hard light red clay. $3\frac{1}{2}'' \times 2\frac{1}{4}''$.

A.T. v. 0036. Stucco fr., crown of human head, with wheel-like arrangement of hair in centre, round which is one row of crescent-shaped locks. Drab clay. See A.T. i. 0030. Diam. $2\frac{1}{2}''$. Pl. VIII.

A.T. v. 0037. Stucco relief fr. Quatrefoil flower resting on voluted leaves. Above begins spear-shaped stalk of next flower. Cf. A.T. iii. 0080. Red clay. $5\frac{1}{2}'' \times 2''$.

A.T. v. 0039. Stucco relief fr. Open eight-petalled flower with bunch of seeds hanging down from corolla. Cf. A.T. iii. 0031. Reddish mud-coloured clay. $2\frac{3}{16}'' \times 1\frac{3}{4}''$. Pl. VIII.

A.T. v. 0044. Stucco relief fr. of drapery, with a zigzag and two narrow vertical folds. Drab clay, white slip. $3\frac{7}{8}'' \times 1\frac{1}{2}''$.

A.T. v. 0049. Stucco relief fr. Fleur-de-lis head. Same scale as A.T. iv. 0074. See *A.T. 0020. $2\frac{1}{4}'' \times 1\frac{3}{4}''$. Pl. VIII.

***A.T. v. 0050. Stucco relief fr.** of circular plaque (diam. *c.* 8″). On plain field traces of attached ornament now missing. Border of three plain fillets with Vandyke band between outer two; to rim are attached small crescents separated by balls; crescents moulded separately. Fine levigated clay, pinkish buff, with traces of white lime-wash. $4'' \times 2\frac{5}{8}''$. Pl. IX.

Cf. A.T. iv. 0020, and for small crescents from the

same mould (but not always used in the same connexion) A.T. ii. 0037; iii. 0011. a–c; iv. 0030. a, b, 00145, 00147, 00149; v. 0051. From smaller mould: A.T. 00112.

A.T. v. 0052. Stucco relief fr. R. upper part of triangle like A.T. 0033, but with crescent border. Cf. A.T. v. 0050. Light red clay, grey in section. 2″ × 1¾″.

A.T. v. 0056. Stucco relief fr. Cloud orn. See *A.T. 0030. 4″ × 2¼″. Pl. VIII.

A.T. v. 0061. Stucco relief fr. Chain; Vandyke band between two fillets. Cf. A.T. ii. 0022. Mud-coloured clay. 1⅝″ × ¾″.

A.T. v. 0062. Stucco relief fr. Bunch of grapes (?); grapes rendered by stamping with concave punch. Cf. A.T. 0044. Red clay. 1½″ × 1¼″.

A.T. v. 0065. Stucco relief fr. Eight-petalled flower with central boss, and part of curved stalk with incised markings. Reddish-drab clay. Cf. A.T. 0060. 2½″ × 1⅞″.

A.T. v. 0067. Stucco relief. Base of statuette; quadrangular with moulding of two sq. members at bottom and same inverted at top. On top hexagonal lotus base, diminishing, upper part missing. Cf. base in *Anc. Khotan*, i. Fig. 29. See A.T. i. 0077. Light red clay. H. 2½″; base 3″ wide, 1⅛″ deep. Pl. IX.

A.T. v. 0070. Stucco relief fr. R. side of standing fig. of Buddha (?); head and all below about middle of thighs lost. R. arm bent at elbow; hand rests on breast. Fig. clad in loose wide-sleeved patchwork garment. Rather coarse work. Red clay, drab surface. 4¾″ × 2½″. Pl. IX.

A.T. v. 0071. Stucco relief fr. Portion of cornice or capital. The neck is a narrow band of horizontal cable. The cushion is covered with overlapping pointed and ribbed scales having convex surfaces. Upon top are remains of thin applied strips of uncertain design. Brick-red clay, creamy wash. 4½″ × 2¾″. Pl. VIII.

A.T. v. 0072. Stucco fr. Thumb with first to third fingers of R. hand. From same mould as *A.T. iii. 0062. Rather coarse reddish clay with thin white slip. 3″ × 1⅞″ Pl. VIII.

A.T. v. 0077. Stucco relief fr. R. leg and L. foot of seated Buddha. Cf. A.T. v. 0029. Red clay, purplish surface. 1¾″ × 2⅝″.

A.T. v. 0080. Stucco relief fr. of flame. Cf. A.T. iii. 0060 (different mould). Light red clay, buff slip. 2⅜″ × 2″.

A.T. v. 0089. Stucco relief fr. At edge fillet with band of stamped circles; in field raised diagonal band with same orn.; leaf orn. above. Light red clay. 1¾″ × 1½″.

A.T. v. 0091. Stucco relief fr. Below, fractured at thin necking; above, this widens out like calix of flower to first moulding. From this to second, nearly straight-sided and cylindrical. Above second moulding is elongated dome terminating in a sq. shaft. Light red clay. 4″ × 2⅜″. Pl. IX.

A.T. v. 0097. Stucco relief fr. of drapery (?), with considerable traces of gilding. Light red clay. 2″ × 1¼″.

OBJECTS FOUND AT RUINED SHRINE, SIYELIK

Si. 001. Fr. of neck of vessel; wheel-made of well-levigated clay, burned to terra-cotta red; kiln-fired. On neck, incised horizontal grooves. Small handle terminating below in anthemion, suggesting metal technique; body apparently covered with lightly impressed stump-drawn patterns. 3″ × 3″. Pl. IV.

Si. 002. Small pottery vase, base and portion of sides of; hand-made, of fairly well-levigated clay, skilfully potted and finely finished outside with engobage; grey clay burned to terra-cotta red. Fired on open hearth or very primitive kiln. 1⅜″ × 2⅛″.

***Si. 003. Stucco relief fr.;** one of several. Buddha seated against a circular vesica of lotus-petals, in the centre of which is a rayed glory; hands bare, folded on lap, feet bare; plain nimbus. 3⅝″ × 2½″.

From same mould: Si. 004; i. 001, 002, 003, 006, 007; ii. 001, 002. These reliefs are taken from the same mould, or from a mould made from the same original, as was used for the Ak-terek series A.T. 0025. a, etc., q. v. All of red clay accidentally fired. Cf. Si. i. 005.

Si. 005. Stucco relief fr. Head of Buddha. L. ear and below mouth broken off. Cap-like hair. Grey clay, accidentally fired. 1 9/16″ × 1⅛″.

***Si. 006. Stucco relief fr.,** one of several. Two volutes curving away from each other (prob. from top of triangular orn.) support a faceted jewel or censer (?); for which cf. K.S. 0017. 1 9/16″ × 1 15/16″.

From same mould: Si. i. 0013, 0014; ii. 004. All of clay, accidentally burned.

***Si. 007. Stucco relief fr.** Eight-petalled circular flower, also Si. ii. 006. Reddish clay accidentally burned. 1 9/16″ × 1½″.

***Si. 008. Stucco relief fr.** of volute flame orn.; from edge of vesica, flat, with groove veining; from same mould Si. ii. 008. Red clay accidentally burned. 2″ × 3″.

Si. i. 005. Stucco circular mould of seated Buddha with hands under robe. Head and upper and lower parts of halo broken off. Outer edge of rays. From the same mould, or from a mould taken from the same original, as the Ak-terek series A.T. 0027, etc., q. v. Cf. Si. 003. 2¼″ × 3″.

Si. i. 008. Stucco relief fr. R. arm, breast, and shoulder of Buddha draped. Clay accidentally burned. 2″ × 1¼″.

***Si. i. 009. Stucco relief fr.**; one of several from the same mould. A triangle having a raised border with bead line, and central filling orn. of jewel bosses in plain ring settings, supporting a plain bordered crescent. 2⅜″ × 2⅜″.
From same mould: Si. i. 0010, 0011; ii. 003. These are from the same mould as A.T. 0033, q.v. All of red clay accidentally burned. Tips of crescent, and triangle below second jewel missing.

Si. i. 0012. Stucco relief fr. of triangular orn. (cf. Si. i. 009); triangle has border of Vandyke between plain beadings, central jewel boss, a leaf orn. in each corner. Crescent missing. 2⅝″ × $3\frac{3}{16}$″.

Si. i. 0016. Stucco relief fr. Head of Buddha. Face complete except R. ear, hair above brow and on L. side. End of nose and chin, and whole back of head lost. Marks inside of reed core. Hair rendered by short curved stamps. Eyes oblique. Well modelled. Mud accidentally burned. 4½″ × 3″.

Si. i. 0017. Stucco relief fr. of lotus-leaf orn. with prominent lobes. Grey clay, accidentally burned. 2¾″ × 1¾″.

Si. i. 0018. Stucco relief fr. of ornamental band with raised edges. Jewel-like orns. in middle. Hard light red stucco. 2″ × $1\frac{1}{16}$″.

Si. ii. 005. Stucco relief fr. of head of Buddha, consisting of R. eye nearly closed, eyebrow, part of cheek and nose. Flat; part of mud core behind. Reddish clay, accidentally burned. 2″ × $2\frac{3}{16}$″.

Si. ii. 007. Stucco relief fr. of drapery, painted crimson. Mark of stick core behind. Red clay, accidentally fired. 3″ × 2″.

OBJECTS FOUND ON 'TATI' BETWEEN AK-TEREK AND SIYELIK

A.T.S. 001. Fr. of pottery bowl. Clay hard, red, with white impurities. Covered both sides with dark green dull glaze. 1¾″ × 1½″ × ¼″.

A.T.S. 002. Fr. of pottery vase, similar to A.T.S. 001. Clay pink. Glaze greenish-blue. ⅞″ × ½″ × $\frac{3}{16}$″.

A.T.S. 003. Fr. of vase of white clay. Outside cream glaze with decoration, one line of brown. Inside, cream glaze with decoration in brown and blue. 1″ × ¾″ × ¼″.

A.T.S. 004. Part of base of pottery bowl. Pink clay. Outside and inside slip of pale green. Mostly missing from outside. 1⅞″ × 1⅜″ × ¼″; diam. base *c.* 2¾″.

A.T.S. 005. Fr. of vase like A.T.S. 001. Glaze peacock blue. Clay light pink. 1⅛″ × ⅞″ × ⅛″.

A.T.S. 006. Fr. of vase of ware like A.T.S. 001. Light red clay. Blotched blue-green glaze. ¾″ × ⅝″ × ¼″. A similar small fr. A.T.S. 007.

A.T.S. 008. Fr. of vase of dark grey green steatite. Decoration consists of four parallel ribs in relief. 1½ × 1″ × ¼″.

A.T.S. 009. Fr. of vase of hard light grey clay, covered both sides with grass-green glaze. 1⅝″ × ¾ × $\frac{3}{16}$″.

A.T.S. 0010. Fr. of vase of pink clay. On each side white glaze with ornament in blue. 2¼″ × 1⅛″ × ⅜″.

A.T.S. 0011. Stucco relief fr. of nose of human fig. Rough reddish clay. 2¾″ × 1½″.

A.T.S. 0013. a, b. Frs. of glass, light green, semi-translucent. (*a*) 1⅛″ × ⅞″; (*b*) ¾″ × ½″.

CHAPTER V

RUINED SITES NEAR DOMOKO

Section I.—THE SHRINES OF KHĀDALIK

First finds brought from Khādalik.

After completing my work at Ak-terek I left the Khotan oasis on September 22 for my explorations eastwards. The first goal in my programme was a ruined site near the small oasis of Domoko about which I had been able to secure information while at Khotan. Since my former journey certain fragmentary manuscripts in Brāhmī writing had reached Badruddīn Khān and through him Mr. Macartney, and on my first return to Khotan I had traced these to diggings which Mullah Khwāja, a petty official of Domoko, was said to have carried on at some ruin situated in the desert not far to the north of that village. Through Badruddīn Khān I had myself secured some fairly well preserved leaves of Sanskrit 'Pōthīs', and on my return from the mountains I had managed to get the man himself brought to Khotan together with some further specimens.

Mullah Khwāja's burrowings.

Mullah Khwāja proved to be no regular 'treasure-seeker' but a respectable village official whom Merghen Ahmad, my old guide to Dandān-oilik, had some five years previously urged to look out for old 'Khats' such as he had seen me excavate. Mullah Khwāja, being in great arrears to the Keriya Ya-mên with revenue due from the oil tax, hoped for a chance of getting out of his debts by such finds. So he induced villagers accustomed to collecting fuel in the desert jungle north and east of Domoko to guide him to some 'Kōne-shahrs' not far off. Scraping among the remains at one of these small sites, known to the woodmen as *Khādalik* ('the place with the sign stake'), he had come upon the hoped-for 'Khats'. Having realized some money by their sale to the Indian and Andijānī Ak-sakāls at Khotan, and having sought favour by presenting others as curios to the Keriya Amban, he had intermittently carried on his burrowings for the last three years or so. On the promise of a good reward and my intercession at the Keriya Ya-mên, Mullah Khwāja readily undertook to show me the provenance of his finds at Khādalik as well as some minor ruins in its vicinity. In consequence of Mullah Khwāja's operations these sites had become well known to the local officials, and others, of the string of oases extending from Chīra to Domoko. Prof. Huntington, too, as I knew, had been guided to them, when in the autumn of 1905 he made those thorough and methodical investigations into the physical conditions prevailing in these oases and in the desert around them, now recorded in his *Pulse of Asia*.[1]

Arrival at Khādalik.

On September 23 I proceeded from the flourishing oasis of Chīra to Malak-ālagan, the northernmost colony of Domoko, which I had first visited in 1901,[2] and near which to the east I knew Khādalik to be situated (see Map, No. 27). For the observations made on the march, which took me past the northern outskirts of the oases of Gulakhma and Ponak and showed me cultivation

[1] See Huntington, *Pulse of Asia*, p. 173. Ibrahīm Bēg, who acted as Prof. Huntington's chief guide in this vicinity, had been employed by me as Darōgha in 1901, and joined me again as I passed through Chīra on September 22, 1906, to remain with me and to render again very valuable services for the whole of my travels during the next two years. Dāūd Bēg, of Yurung-kāsh, who had made himself useful to Prof. Huntington, also joined me for a time.

[2] See *Ancient Khotan*, i. p. 454.

advancing again into ground long abandoned to the desert jungle, I may refer to my Personal Narrative.[3] Next morning after taking some twenty labourers from Malak-ālagan we moved a little south of east, crossed the stream of Domoko-yār near where the canal of Malak-ālagan takes off, and after marching for about three and a half miles through a maze of conical sand-hills overgrown by tamarisk scrub arrived at the Khādalik Site. The appearance of pottery débris forewarned me within the last half-mile or so.

The site at first glance seemed to hold out little archaeological promise. There was a little plain about 400 yards from east to west and less than that across, fringed all around with tamarisk-covered sand-cones (see Fig. 39). The ground, in parts wind-eroded and elsewhere overrun by low dunes, showed no indications whatever of structural remains except one or two quite low mounds near the centre, with scattered fragments of stucco and timber on the surface. Considering how near the site was to an area still occupied and how exposed its remains must have been from early times to constant exploitation, I could not feel surprised by the absence of those gaunt remnants of timber-built houses and of ancient orchards which had at once struck the eye at sites like Dandān-oilik and Niya, far out in the desert. But the appearance of the extensive mound which Mullah Khwāja pointed out as the provenance of the manuscripts suggested such multifarious burrowings that it seemed as if none of its layers could have escaped undisturbed.

First clearing of débris mound.

After a rapid preliminary survey of the whole site, including a small detached débris-area about half a mile to the east, I set the men to work where a shallow eroded depression approached the south face of the mound. Small broken pieces of stucco from a frescoed wall, evidently belonging to a Buddhist shrine, were discovered almost immediately on the sand-covered slope, and with them little fragments of paper manuscripts written in bold Brāhmī script of the Central-Asian Upright Gupta type. Within half an hour the first important 'Khat' was brought to light from a depth of about two and a half feet, in the shape of three almost complete leaves of paper, fifteen inches long by four and a half in height, which I could recognize as belonging to a Pōthī of some Buddhist Sanskrit text. More finds of the same kind, but in far greater number, followed in rapid succession. These consisted of detached leaves, sometimes even of small packets from the same Pōthī, mostly broken, or of mere torn fragments. All the manuscript remains were in Brāhmī script, but plainly belonged to a number of different texts, either in Sanskrit or that 'unknown' language of ancient Khotan for which recent researches have established Īrānian origin. Among the latter finds was a convolute, containing the major portion of ten leaves each made up of two sheets of thin yellowish paper which were pasted back to back and bore writing on one side only, after the fashion of Chinese printed books. With them turned up, though far more rarely, oblong wooden tablets of small size, inscribed in the same non-Sanskritic language. The total number of individual 'finds' of these kinds exceeded a hundred by the evening.

Fragments of painted stucco, evidently from frescoed walls, of appliqué relievos and of painted panels, were also discovered in plenty, all closely recalling in style and technique the remains found among the Buddhist shrines of Dandān-oilik in 1900. The assurance thus conveyed as to the character and date of the ruin was doubly welcome at the start; for vainly did I watch that first day for the appearance of any structural remains *in situ*. The excavation was, indeed, carried down through the layers of sand and plaster débris to the original floor of the building; but it still left me without guidance as to its shape or extent. One thing, however, was clear, that the temple had been a large one, and that the burrowings of Mullah Khwāja and his associates had by no means exhausted the débris heaps left behind by the destructive operations of a far earlier time. However

[3] Cf. *Desert Cathay*, i. p. 238.

thorough this destruction had been, there was comforting evidence that the relics still remaining had yet escaped damage from either fire or moisture.

Structural features of shrine Kha. i.

With a large additional contingent of labourers which the vicinity of Domoko allowed me to summon, the work of clearing was vigorously continued on September 25. Soon the first indication of the structural disposition of the building was obtained in a line of low broken posts marking the position of a timber and plaster wall. Faint traces of plastered steps leading up to this showed that it was the outer wall of the main shrine facing south. Similar remains of the east wall were soon laid bare, and with the remnants of cella walls of the same material subsequently discovered I was able in due course to reconstruct the ground-plan of the temple as reproduced in Plate 6.

This shows it to have formed a quadrangle of which the external measurements were seventy-five feet on the east and west and seventy-three on the north and south. The middle of this quadrangle contained a cella, measuring on the inside a little over twenty-eight feet. The centre of the cella was occupied by a badly decayed base or platform, ten and a half by nine and a half feet. It rose in its completely broken state to a height of about two and a half feet above the plastered floor, without a trace of its original stucco facing. The space left between the outer walls and the cella, twenty-one feet on the north and south and twenty on the other sides, seemed *a priori* far too wide for the enclosing passage for which the example supplied by the majority of the shrines excavated at Dandān-oilik and elsewhere in the Khotan region led me to look. So I was not surprised when the complete clearing of the temple area north of the cella revealed manifest remains of intermediate walls which seem to have divided this outer space into no less than three concentric passages.

Pieces of frescoed wall surface.

One of these intermediate walls could be traced with practical certainty by a large and well-carved foundation beam (marked *a*), inserted in the flooring parallel to the outer north wall and at a distance of about six and a half feet from it. Numerous detached pieces of frescoed wall stucco turned up in a corresponding position parallel to the west wall. To a second intermediate wall must be attributed the large stucco wall surface, measuring nine by five feet and covered with stencilled rows of small Buddha figures, seen in Fig. 41. It was discovered lying with its frescoed face downwards close to the floor at about the same distance from the north cella wall and approximately parallel to it (see *b* in Plan). The identical fresco pattern which is known from Dandān-oilik to have been frequently used for the decoration of lower wall surfaces as a kind of dado[4] was found in corresponding positions further east on smaller fragments of wall stucco. Finally, it is possible that certain cuttings in the floor which I noticed chiefly in the temple area south of the cella, running there parallel to the outer wall, may be the result of the quarrying done to remove other foundation beams.

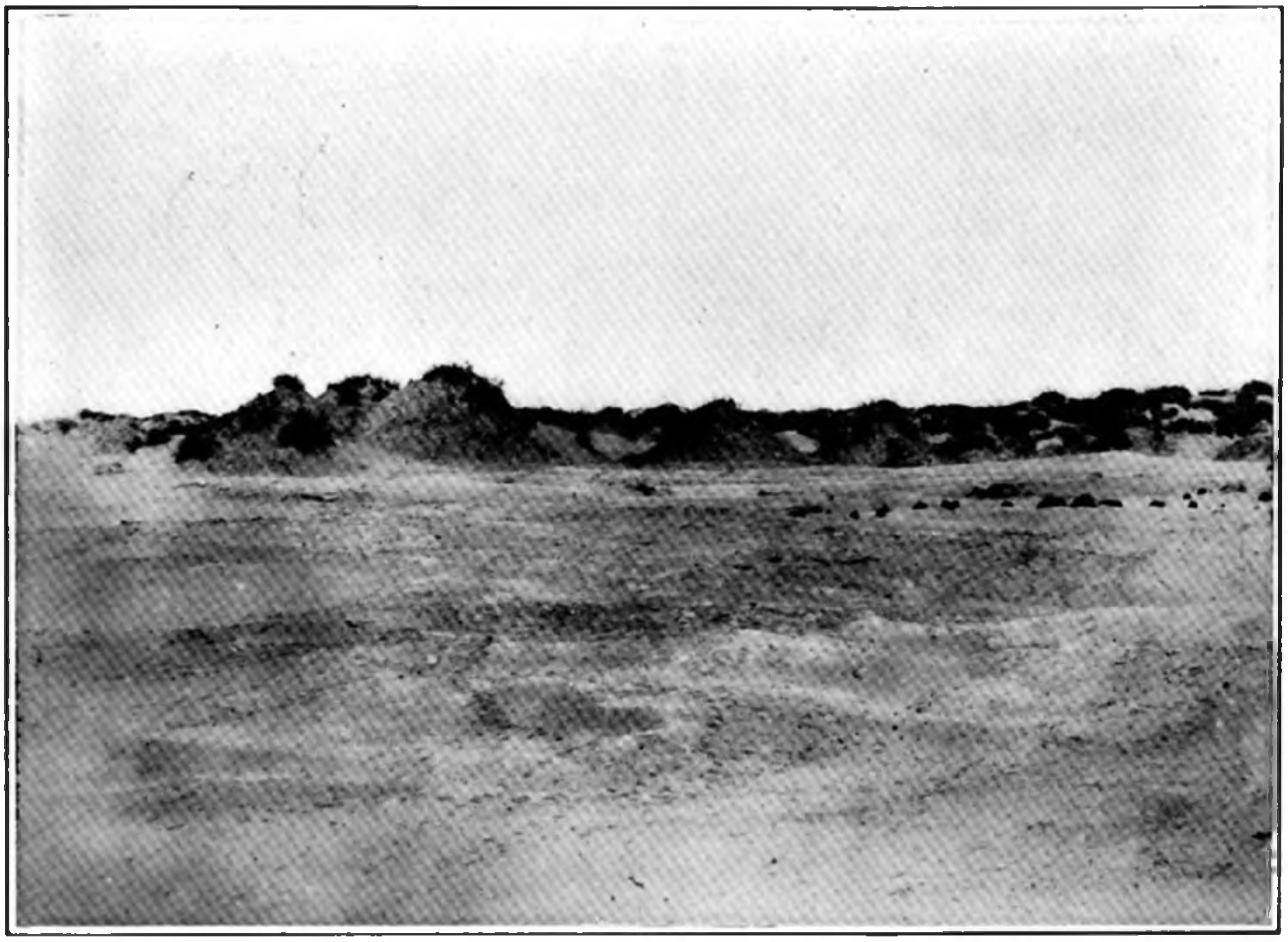
Destruction of walls by quarrying.

In spite of all efforts, and of the large number of men kept at work, the excavation of this shrine (marked Kha. i) was not completed until the evening of September 26. So great was the mass of sand and débris which had to be shifted, and so exacting the care needed in securing the rich yield of manuscript leaves, fragments of stucco relievos and painted wooden panels, and pieces of frescoed wall plaster which lay mixed up with it.[5] There was plentiful evidence that the walls had been constructed of timber and wattle after the fashion of those found in the shrines of Dandān-oilik,[6] and had been almost completely destroyed at an early period for the sake of

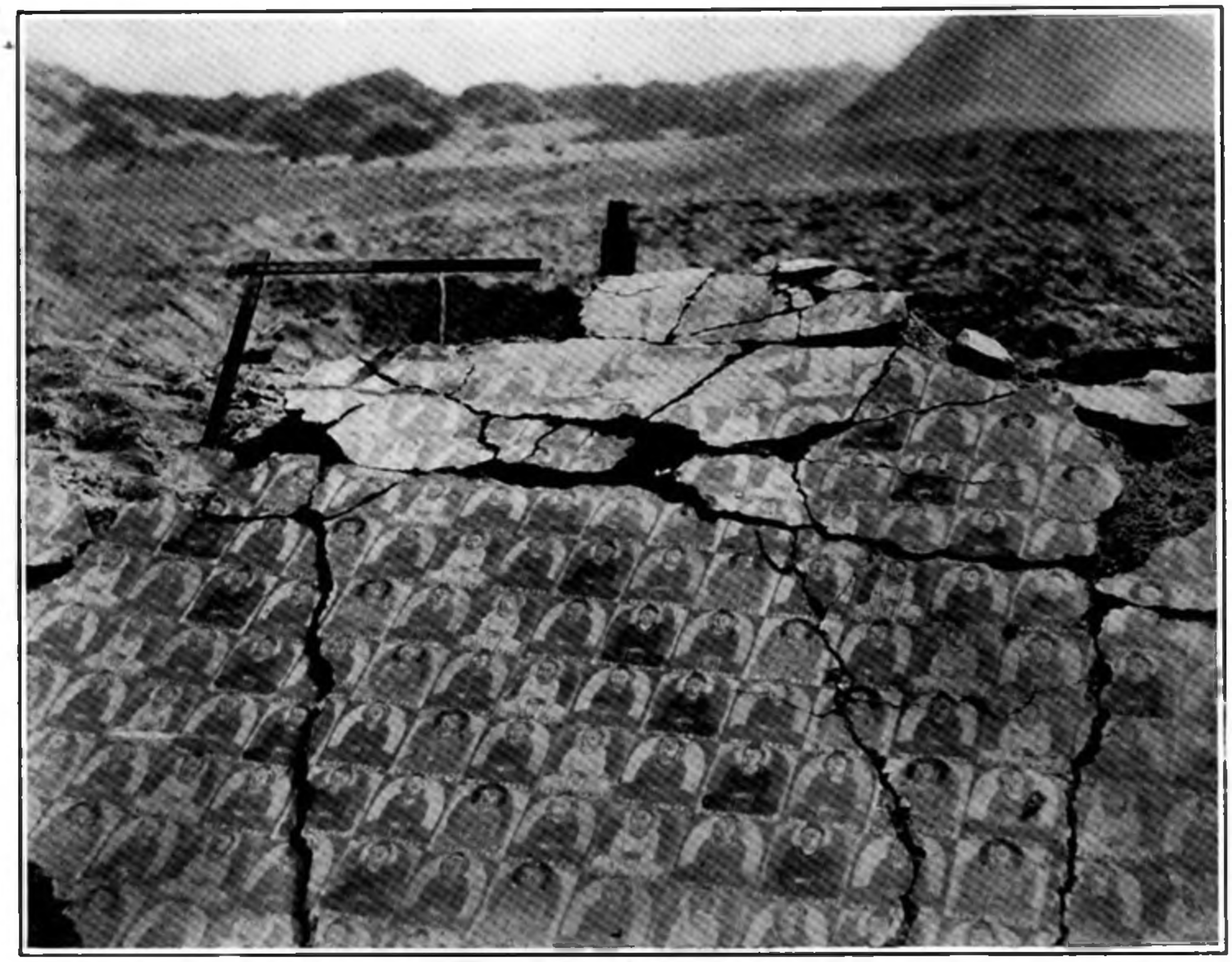
[4] Cf. *Ancient Khotan*, ii. Pl. II, IV.

[5] The marks Kha. i. C, E, N, W, used in the Descriptive List indicate objects found approximately in the centre, east, north, and west of the area of the shrine.

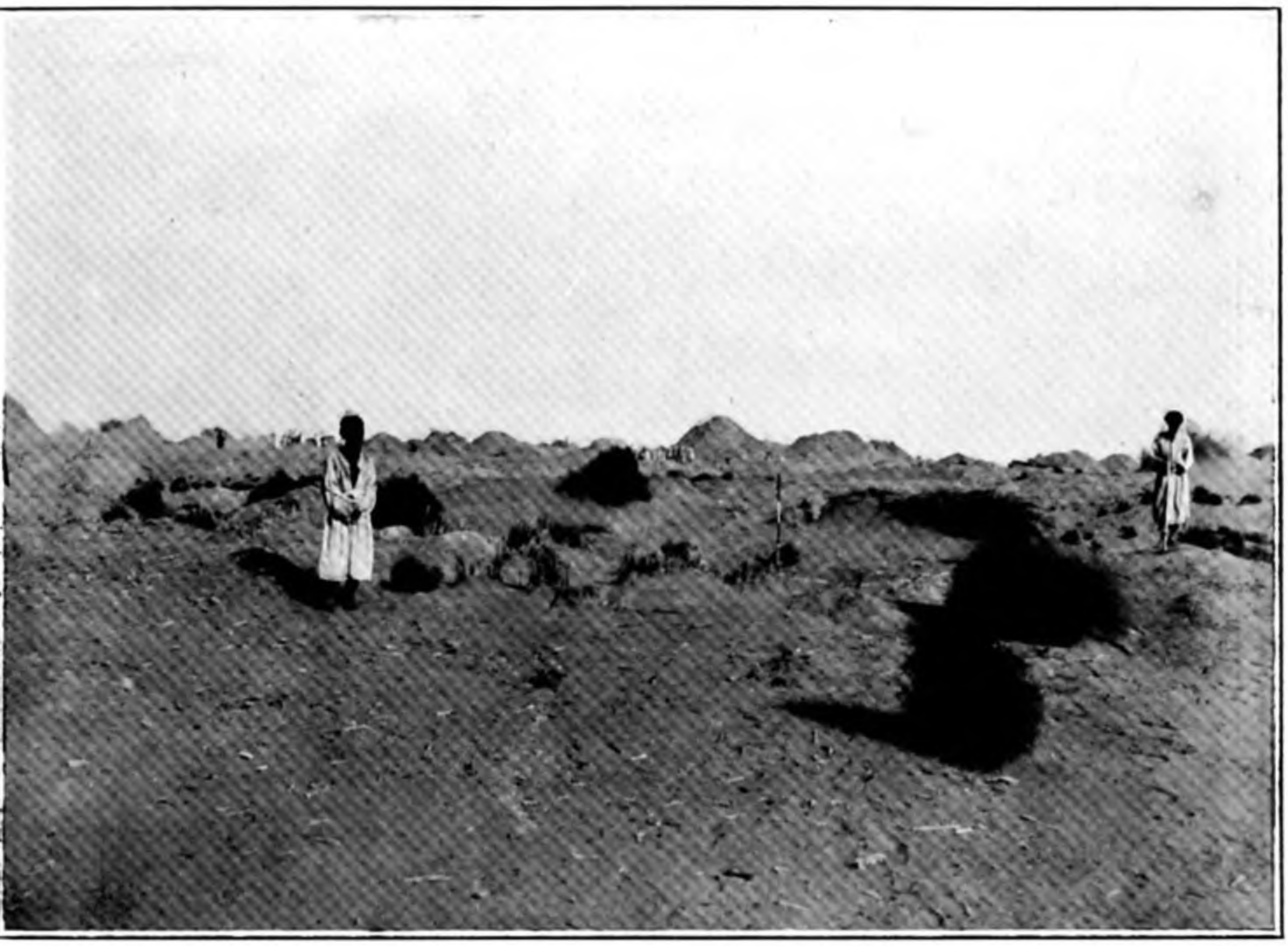
[6] For a specimen of this construction which has survived in a wall of the detached room Kha. viii, see the inset in Plan, Pl. 6.



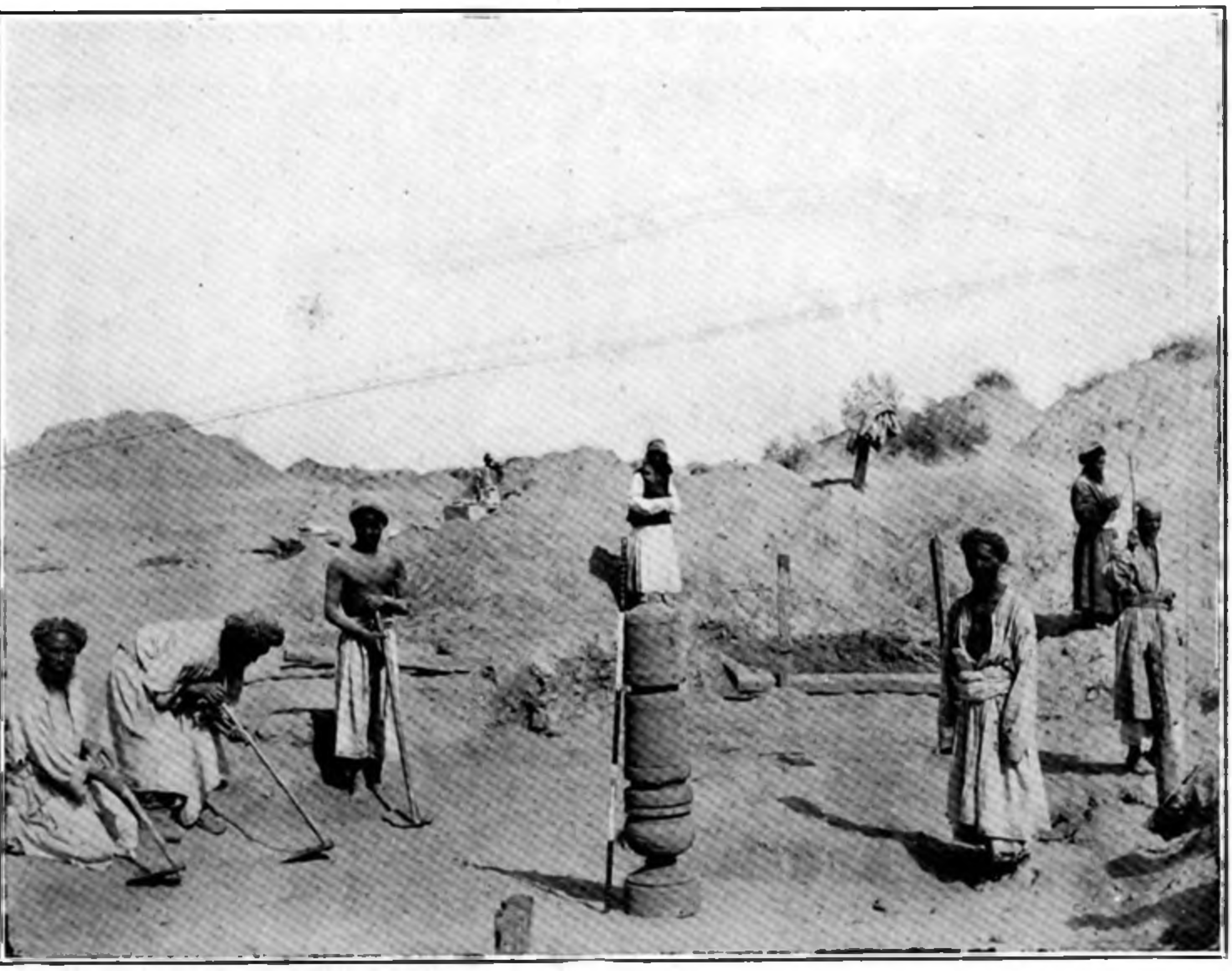
39. GENERAL VIEW OF KHĀDALIK SITE BEFORE EXCAVATION, FROM SOUTH.



41. FRAGMENT OF STUCCO WALL WITH STENCILLED BUDDHA FIGURES FROM PASSAGE OF TEMPLE Kha. i, KHĀDALIK.



40. REMAINS OF RUINED QUARTERS, Kha. xi, KHĀDALIK, BEFORE EXCAVATION.

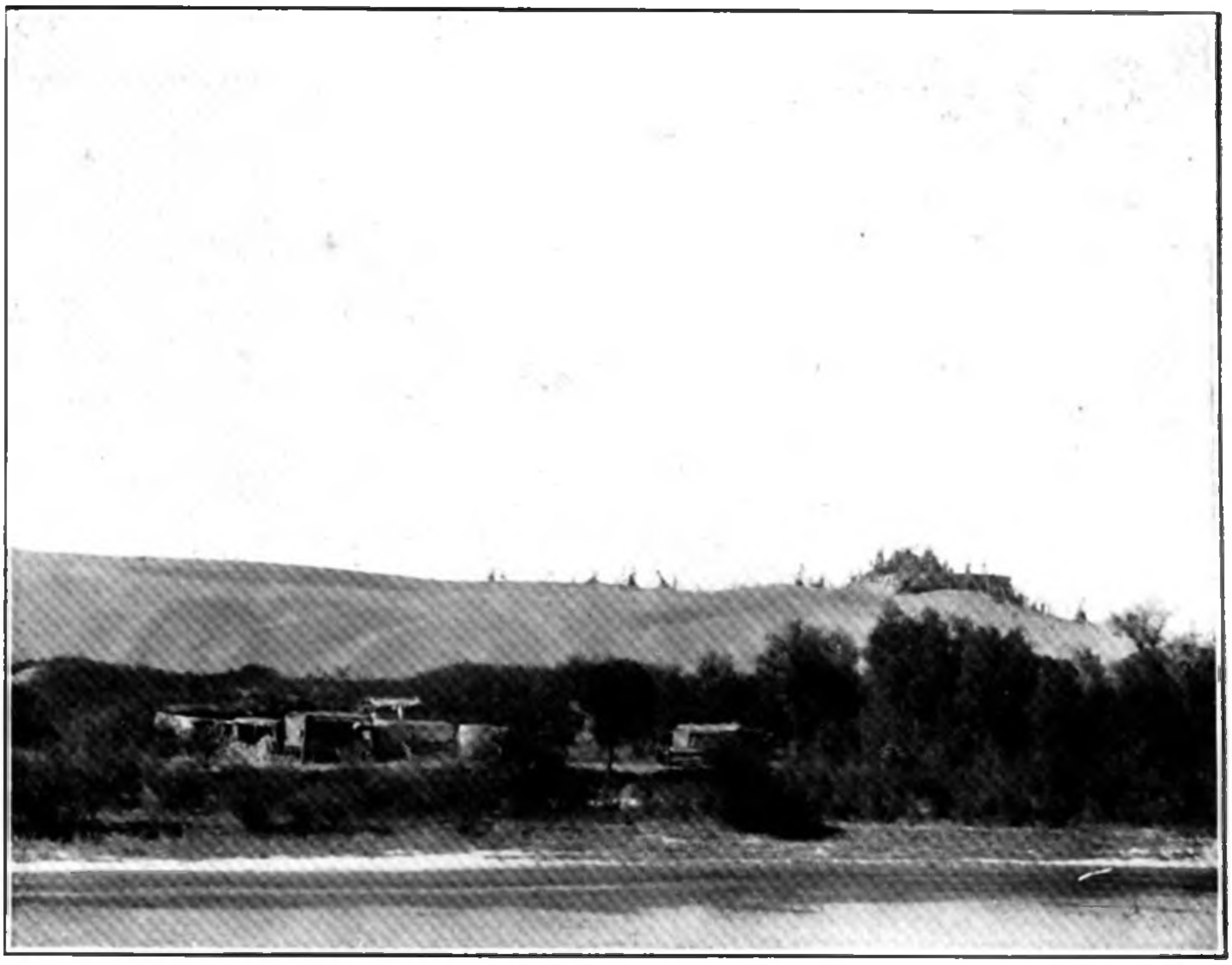


42. RUINED SHRINE Kha. ix, KHĀDALIK, AFTER EXCAVATION SEEN FROM SOUTH.

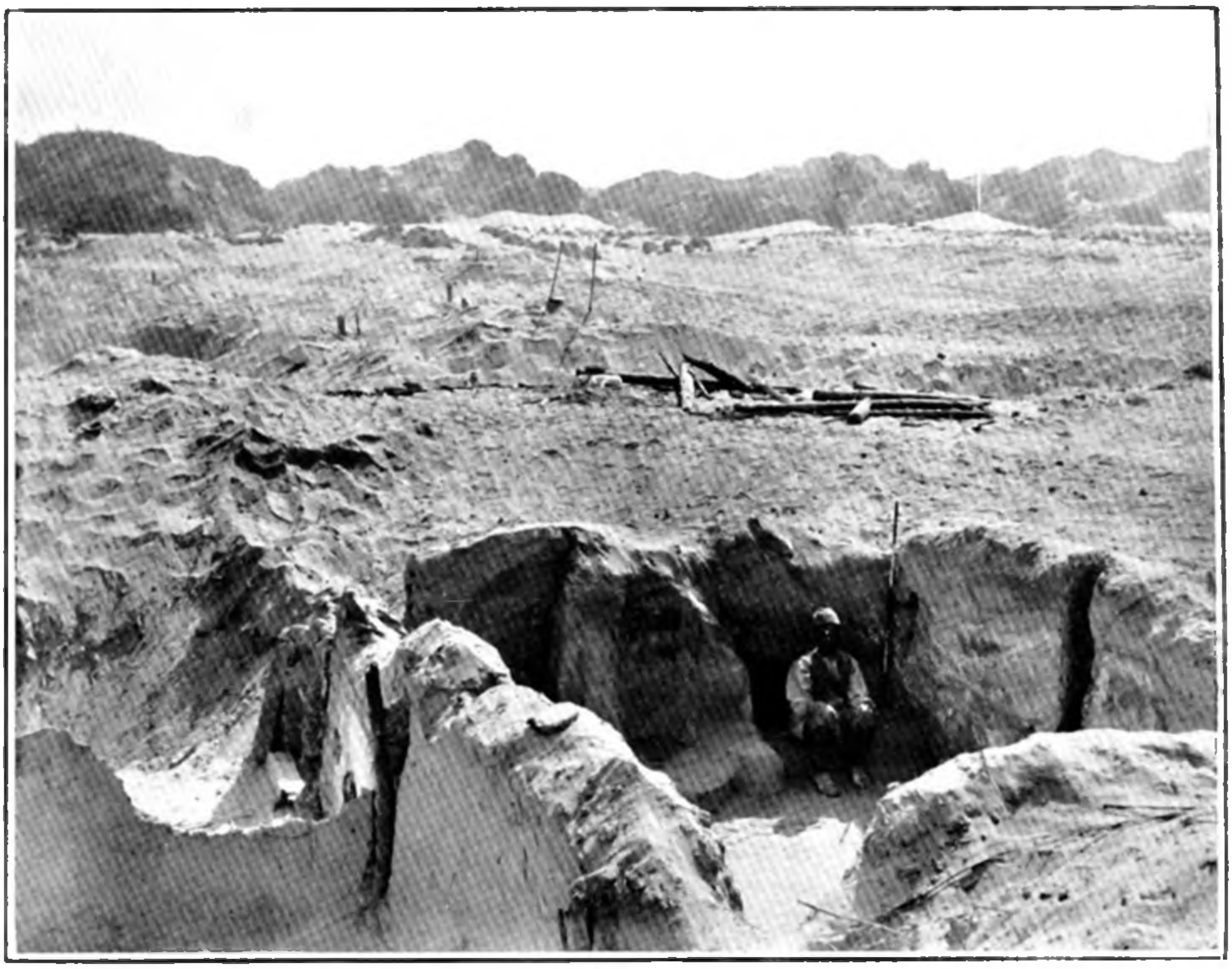
43. WIND-ERODED 'TATI', S.W. OF KIGHILLIK, KHĀDALIK.

45. REMAINS OF RUINED DWELLING Kha. iv, v, KHĀDALIK, SEEN FROM NORTH-WEST, AFTER EXCAVATION.

(See p. 159)



44. MAZĀR OF IMĀM JA'FAR SĀDIQ, SEEN FROM SOUTH-EAST.
(See p. 212)



46. INTERIOR OF ROOM Kha. iv, KHĀDALIK, SHOWING FIRE-PLACE AND SITTING-PLATFORM.
(See p. 159)

abstracting the woodwork. As a sign of the thoroughness with which this quarrying must have been done, I may mention that out of a total length of wall which, if the reconstruction of the ground-plan is right, must have exceeded nine hundred feet, the only fragment surviving *in situ* consisted of a piece of the eastern cella wall, *c*, about four feet in length and standing less than a foot and a half in height.

Early abstraction of timber.

The larger posts and beams must have been worked up on the spot for facility of transport elsewhere; for again and again I came upon heaps of carpenter's chippings, these often showing remains of delicate painted figures of Buddhas, etc., with which the surface of pilasters and other exposed woodwork had evidently been covered. Those engaged in this vandal task seem to have done much of their work within the small rooms viii, ix, and x, laid bare immediately to the north of the shrine. There great heaps of chippings, as if from a carpenter's shop, were subsequently discovered. From the fact that these heaps lay only a foot or less above the original floor I conclude that the interval between the abandonment of the shrine and this quarrying could not have been a very protracted one. The very selection of these rooms for the carpenter's workshop points to the same conclusion; for evidently they were then still sufficiently preserved to offer some protection from wind or sun.[7]

In any case it is obvious that the quarrying of the timber and the splitting off of the painted panelling could not have been due to iconoclastic intentions; for such the burning of the whole structure would have offered itself as a far more convenient and thorough expedient. On the other hand, it is equally certain that such extensive destruction was not the work of modern 'treasure-seekers' or of Mullah Khwāja's party who would have been only too glad to preserve the painted panels, etc., for sale. Numismatic evidence fixes the abandonment of the site at the close of the eighth century A.D.,[8] so that I am inclined to date the quarrying of the abandoned shrine for its timber from the early Muhammadan period.

Ruined shrine Kha. ii.

The similarity in character and style of the 'finds' made in this and the other shrines which I excavated close by is so great that it appears from every point of view most convenient to leave my brief survey of the chief classes of antiques represented among them for one place, and that after completing my account of the various structures brought to light at the site. The ruin next explored was that of a Buddhist shrine marked by a low débris heap some forty yards to the south of the first one (see Kha. ii, iii, Plate 6). Here the work proved very interesting and varied in its results, though the structure was smaller in extent. It consisted of a rectangular cella, measuring twenty-five by twenty-four feet inside and enclosed by a passage eight feet wide on the north and five elsewhere, with a large hall (iii) adjoining the south passage. The walls had been broken down in most parts nearly to ground-level; yet having been built of sun-dried bricks, they could in spite of their relatively slight thickness be traced with greater certainty than those of Kha. i. Wooden posts had served for the strengthening of the walls; but the wood had completely perished, leaving only empty matrices as traces of its use.

Fresco remains on walls of Kha. ii.

In the layer of rubbish and sand, three to five feet deep, which covered the cella and passages, small pieces of painted stucco were plentiful, showing that the walls must have all borne frescoes. But all the extant remains of walls had lost their stuccoed surface, except only where some portions of wall still rose to a height of about a foot and a half on either side of the

[7] The discovery within room viii of a large Pōthī, partially rotted, lying on a heap of perfectly preserved chippings, can easily be explained on the supposition that the manuscript packet had been thrown there from some other place where it had lain before exposed to rain and damp. Here I may also mention the large piece of a thick fibre rope which a trial trench, opened to the west of shrine i, laid bare beyond Kha. iv, and which looked as if it had been used and left behind by those who were digging up the timber.

[8] See p. 159.

western of the two entrances which led from the north passage into the cella (marked *b*). Here, on the wall facing the passage, the lower portions of haloes were visible, evidently belonging to over-life-size figures now lost, and below these could be made out groups of small kneeling figures, representing worshippers. The colours had everywhere badly faded. But under the large halo to the west of the entrance there still showed in graceful and bold outlines, either pink or black, a Persian-looking vase with a white lotus, and to the right of it two pairs of richly dressed male figures with hands joined in prayer. Their height was only six or seven inches. The very friable condition of the stucco prevented an attempt at removal.

Remains of stucco relievos.

Plentiful small appliqué relievos of stucco turned up in the débris throughout. Most of these were fragments, evidently from the decorative aureoles which surrounded colossal figures, as explained in connexion with the Ak-terek remains. The hard material used, a kind of plaster of Paris, explained the survival of the small plaques, representing Buddhas seated or standing in the 'Abhaya-mudrā', flying garland-holding Gandharvīs, adoring attendants, etc. (see Plate XV), which turned up with particular frequency along the north wall of the cella. But the former presence of life-size and colossal figures in stucco was also attested by finds of fingers, hands, and pieces of heads, found especially in the eastern part of the cella. Colours and traces of gilding often remained on these sculptural fragments. Of special interest were finds of moulds in hard plaster of Paris (Kha. ii. 0074–0077, Plate XVI) which had served for the production of various ornamental details in the large vesicas and also of portions of the hair and drapery in large figures. The remains of painted wood, though not so abundant as in Kha. i, comprised several panels evidently deposited as votive offerings, just as at the Dandān-oilik shrines. The survival of these and of pieces of wood-carving, including the figure of a seated Bodhisattva carved in the round (Kha. ii. N. 008, Plate CXXXVIII), was all the more gratifying because in the north-west corner of the cella and in the adjoining passage a destructive fire had left clear traces in blackened stucco relievos, charred wood, and leaves from paper manuscripts almost completely perished.

MS. finds in Kha. ii.

But curiously enough it was just here, within the cella entrance *b*, that I came upon a small packet of leaves from a Sanskrit Pōthī written on birch bark which had escaped in spite of the extreme brittleness of the material and the burning of a paper manuscript close by. The Bhūrja material pointed plainly to origin in Northern India, probably Kashmīr, and the character of the writing in the Gupta type to a relatively early date. The leaf measured ten by three inches. Among the manuscript finds, which were less numerous than in Kha. i, special mention may be made also of some wooden tablets inscribed in cursive Brāhmī and in what may be taken to be the old Īrānian language of Khotan; a wooden board, as used for holding Pōthīs, with leaves of paper sticking to it; a badly damaged sheet of paper with miniature work in colour (Kha. ii. E. 6). For all these MS. remains reference may be made to Dr. Hoernle's Appendix F.

Miniature Stūpas in clay

Very curious relics of the worship once offered here were miniature Stūpa models in clay, none higher than two inches, of which some two dozen were found in the cella. As the specimens taken (Kha. ii. C. 001, 002, 007–009) show, they reproduce roughly the succession of three bases, drum and dome. On the top a small twig was usually found inserted to represent the staff or mast which carried the umbrellas of the real Stūpas, while the small pieces of inscribed paper attached may have been meant by the humble donors to indicate flags. That other modest votive gifts could also be manufactured on the spot is shown by the mould for a small seated Buddha image (Kha. ii. N. 0014, Plate XVI). No doubt most of the manuscripts found here and in the other shrines of the site had been originally deposited as votive offerings. But as quarrying operations had disturbed both this and the larger shrine it was impossible to make certain to what extent the dispersion I observed of leaves, and often of small fragments, from the identical manuscripts in widely separated

parts of the same building may have been due to the fact that the pious worshipper depositing them had endeavoured to please with his offerings as many as possible of the divinities represented.[9]

Find of stringed coins.

But votive deposits of far greater archaeological value came to light in the shape of Chinese copper coins, discovered deep down under the débris which filled the north-west corner of the enclosing passage (marked *a* in Plan). First there was found on the floor a scattered batch of thirteen 'cash' pieces all belonging to the T'ang period, and then, as if to satisfy my craving for exact chronological evidence, quite close to the foot of the wall two completely preserved rolls of coins, counting twenty and fifty-four pieces respectively, still held together by the original string which the last owner had passed through their square holes. Rapid examination showed me that these rolls were made up, apart from a few *Wu-shu* pieces, of T'ang coins only, the latest being issues of the Ta-li period (A. D. 766–79). Almost all these coins were in very good preservation. The detached set comprised nine coins of Ch'ien-yüan (A. D. 758–60), three of Ta-li, and one *Wu-shu*. In the smaller string Mr. J. Allan found besides one *Wu-shu* and one 'cash' of the K'ai-yüan issue, current from A. D. 618–27, sixteen Ch'ien-yüan and two Ta-li pieces. The second roll was made up of two *Wu-shu*, two K'ai-yüan, forty-two Ch'ien-yüan, and eight Ta-li coins.[10]

Votive deposits of this kind must obviously belong to the period immediately preceding the abandonment of the shrine, and only current coins are likely to have been used for them.[11] None of the T'ang coins shows any marks of long circulation, so that it is safe to fix the date of abandonment for the whole Khādalik site, with its closely adjoining ruins and remains of identical type, at the close of the eighth century A. D. In confirmation I may also note that of the sixteen Chinese coins, found by me elsewhere at the site and most of them close to the west of Kha. ii, all with the exception of one *Wu-shu* piece belong to the T'ang periods already noted, and that of the four coins brought to me from the vicinity of the ruins none goes down later than the Chien-chung period (A.D. 780–3).

Excavation of Kha. iii and small dwellings.

The structure, Kha. iii, immediately adjoining this shrine on the south proved to contain a single hall measuring some forty-seven by forty-two feet. Its southern portion was occupied by a plastered platform, fifteen feet wide, rising ten inches above the floor which itself lay two feet higher than that of Kha. ii. The foot of the platform showed a bold moulding three inches wide. The finds in this large place were very scanty, and besides a small wooden tablet with traces of Brāhmī writing comprised merely a small disc of malachite, of uncertain use, and a flat wooden food-bowl. To the west of the large shrine and within eleven yards of it, a trial trench subsequently laid bare a small structure relatively well preserved and undoubtedly once used as a dwelling (Fig. 46). It consisted of a room to the south, Kha. iv, built with walls of sun-dried brick still standing to a height of about five feet, and of a small room and veranda, Kha. v, adjoining it on the north. Both were constructed with timber and plaster walls. The room Kha. iv, about seventeen by twelve feet, still retained its substantially built clay fire-place, and in the corner beside it a plastered sitting platform. Fallen rafters and reed bundles from the roof filled the interior which closely recalled to my mind the small monastic dwelling D. III at Dandān-oilik.[12]

Finds in quarters, Kha. v.

The veranda, Kha. v, and the small apartment at its back showed walls of timber and wattle, with horizontal layers of reeds to retain the surface plaster, exactly after the method I had found prevailing in the Dandān-oilik structures. The wall to the right of the door leading into room iv had a small recess, about a foot deep, which had evidently served as a cupboard. The finds made in Kha. v were few; but several presented distinct interest. Along with broken pieces of posts and

[9] This was the case in the shrine excavated at Endere in 1901; see *Ancient Khotan*, i. p. 425.

[10] Cf. for details Appendix B.

[11] Cf. the remarks on similar coin deposits found at Rawak, *Ancient Khotan*, i. p. 501.

[12] See *Ancient Khotan*, i. p. 256; Figs. 32, 33.

beams there were found here a pair of well-carved double cantilevers in wood (Kha. v. 003. a, b; Plate XVII) which once, no doubt, supported the roof. A wooden key, Kha. v. 001, from the room, resembling in make others found at this site (Kha. ii. 0038; ix. 008; Plate XVII) and subsequently elsewhere, soon received full explanation by the discovery of a wooden lock with bolt and tumbler block, which turned up outside on the veranda floor (Kha. v. 006; Plate XVII) but which must have been worked by a different key. The system of these wooden locks and keys is fully explained by Mr. F. H. Andrews's lucid note and drawings given in the Descriptive List below (see Kha. v. 006). Here it must suffice to mention that it is substantially identical with one still surviving from the southern shores of the Mediterranean to Yārkand, Khotan, and Ladāk, and that its use can be traced back to classical times.[13] There was found here also an excellently preserved broom, of a make identical with those I found in 1901 at Dandān-oilik and the Niya Site.[14]

Find of cotton seed and cotton fabric.

More important for the student of ancient industry was the discovery of a heap of cotton seed, furnishing indisputable proof that the cultivation of cotton was established in the Khotan region by the eighth century A. D. Plentiful as have been my finds of ancient textile materials of all sorts from Khādalik to Lop-nōr, they have, as far as their expert analysis has proceeded, proved to be manufactured only of wool, hemp, or silk. Whether the rags and coils of thread found in this identical veranda contain any cotton I have so far not been able to ascertain. [Since the above was written, I have been informed by Dr. Hanausek that the specimen Kha. v. 005, which he has been kind enough to analyse under the microscope, has proved to contain cotton threads.]

Clearing of area to east.

The subsequent clearing of what uneroded ground was left to the east of Kha. i showed a plastered flooring throughout, but did not reveal the presence of any structural remains. But near the southern edge of this area, Kha. vi, we came upon numerous fragments of leaves in Brāhmī script and an oblong tablet with the same writing. They had evidently been deposited near the entrance to a small shrine the walls of which, a little over ten feet square, had left their trace in shallow depressed lines marking the position of the foundation beams on the floor. Within the cella space were found the small relievo image in wood of a standing Buddha, Kha. vi. 6 (Plate XIV); a well-carved wooden pedestal for a statuette with lotus throne, Kha. vi. 17 (Plate XLVII); the fragment of a painted panel; a well-preserved paper document with cursive Brāhmī script on both sides, Kha. vi. 14, with more Pōthī fragments and inscribed tablets. About halfway between Kha. i and Kha. vi, but somewhat further north than the latter, a circular hole, seven and a half inches in diameter and two feet deep, was discovered in the floor. This was still closed with a wooden peg wrapped with a brown woollen fabric, Kha. vi. 1. a, but the small receptacle was found empty.

Objects found at Kha. vii.

On a piece of ground some eighty yards to the north-east of Kha. i small stucco fragments both from decorative relievos and frescoed walls had attracted my attention. The clearance here effected on September 29 showed that of the shrine which had once stood here, Kha. vii, nothing survived but the plastered floor and the sunk lines left in it by the foundation beams of walls, about twenty-five feet square. The depressions marking the position of the beams were three inches deep and six wide, with remains of timber and reeds at the bottom. Among

[13] My late assistant Mr. H. G. Evelyn-White supplied me in 1910 with the model of wooden locks of exactly the same construction which he had found in modern use at the Khargah oasis, Egypt. M. Arnold van Gennep, editor of the *Revue d'Ethnographie et de Sociologie*, who has made a special study of such lockings, after reading my reference to the Khādalik find in *Desert Cathay*, i. 245, wrote to me in a letter dated March 12, 1912: 'Judging from your phrase, the system . . . is the same as the Zanzibar one. I found it last summer, wooden in the Aurès, of bronze at Tlemcen. A friend sent me a description of the same, of iron, at Figuig, and another brought me back a wooden one from the Chaouïa in Morocco.'

[14] See *Ancient Khotan*, i. pp. 251, 336; ii. Pl. LXXIII.

the relievo fragments found in clearing the cella floor, flame and lotus-wreath ornaments, once undoubtedly forming part of large vesica borders, were most numerous. These made it quite certain that the style of decoration must have been the same here as in Kha. i and Kha. ii. Of the larger sculptures in stucco only the fragment of a head, Kha. vii. 2, slightly over life-size and gilt, had survived as well as a finely modelled hand, Kha. vii. 009. A mass of miniature Stūpas in clay, between two and three inches in height and all uniform in shape, of which Kha. vii. 0010 (Plate IX) is a specimen, lay closely packed in one corner. They alone had escaped thorough destruction. It was of interest to note that they showed a cylindrical topmost base, supported by eight round buttresses, and a dome surmounted by a square crown just as is commonly seen in small stone-carved Stūpas of Gandhāra.[15]

Excavation of rooms Kha. viii, x.

Immediately to the north of Kha. i there were laid bare under a cover of four to five feet of sand the small structures where those quarrying the large shrines for timber had established their workshop. The walls were uniformly built of timber and wattle, and the good preservation of the lower portion of the north wall in Kha. viii has made it possible to illustrate the system of construction by the section reproduced in the detailed plan (Plate 6). In Kha. viii, a room seventeen by twelve feet, the clay-built fire-place, and a plastered sitting platform in the corner beside it, still survived. In front of the seat there was found a trough of unbaked clay, two feet by one, of uncertain use. On the top of the heap of chippings which filled part of the room to a height of about two feet from the floor, was found the large but partly rotted packet of paper leaves from two Pōthīs in Brāhmī script which I have already mentioned. In addition to various fragments of other manuscript leaves the finds here consisted of some turned pieces of wood, belonging no doubt to Kha. i, including a baluster and two knob-shaped finials. The small structure, Kha. x, unearthed further west, had suffered more damage; but the identical arrangement of fire-place, etc., showed that this, too, had served for quarters. Apart from plentiful wood chippings the only find made here was the portion of a panel painted on either side with the seated figure of some divinity. Though its colours were badly effaced the painting still showed some interesting details of dress (see Kha. x. 1 in List) which recall similar representations on the Dandān-oilik panels.

MS. finds in Kha. ix.

Far more abundant remains and of a varied kind came to light in the small ruin Kha. ix (see Fig. 42), situated to the north of Kha. x and within five yards of it. Here were discovered at first, scattered among wood chippings on a level about two feet above the floor, very numerous single leaves and fragments from a Sanskrit Pōthī, written in imposingly large Brāhmī characters on paper which had an original size of about twenty-two by nine inches. There were numerous packets also, all broken, containing closely packed layers of leaves from the same manuscript, and curiously enough these seemed to have suffered more from damp than any of the detached pieces. It was evident that they must all have been scattered about after the ruin had become partially filled with sand; but no definite indication could be found as to where this big Pōthī or portions of it had originally been deposited. That its dispersion had begun earlier was, however, proved by a curious little convolute which was found in the small structure just north of the cella. In it there were rolled up fragmentary leaves of the large Pōthī, a narrow folio of another Sanskrit manuscript, and part of a document in cursive Brāhmī script written on both sides of a thin sheet of paper.

The place richest in these finds proved to be a small cella, about eight feet square, marked by a plastered floor which rose about six inches above the rest of the ground here. No traces of its

[15] Cf. e.g. Foucher, *L'Art du Gandhâra*, i. Figs. 70, 71.

walls survived, but some relievo fragments in stucco once belonging to vesica borders indicated that its decoration had closely resembled that of the larger shrines. Apart from the Pōthī pieces, Kha. ix yielded half a dozen wooden tablets inscribed with Brāhmī characters; a small four-faced stick showing the same script on each side; two tally-like narrow pieces of tamarisk-wood notched and bearing short Brāhmī legends in places. Of special interest was the discovery of a narrow tablet, Kha. ix. 7, bearing Tibetan writing and showing on its left end the same raised seal-socket which appears on so many of the Tibetan wooden documents from Mīrān and Mazār-tāgh (see Plates CLXXI, CLXXII). According to Dr. Francke's decipherment the writing on the reverse shows the title and name of a minister. Together with two other fragmentary wooden records in Tibetan from Kha. vi and Kha. viii this discovery supplied the first tangible proof that the presence of the Tibetan invaders, attested by the Chinese Annals for different periods of the eighth century, was in Khotan territory not confined to mere inroads.

Decorative wood-carvings in Kha. ix.

Among the miscellaneous 'finds' the remains of fine decorative wood-carving, Kha. ix. 14 (Plate XIV), 16 (Plate XLVII), deserve special mention on account of the clear impress they bear of Gandhāra style. Finials such as Kha. ix. 0027 (Plate XVII) and turned balusters are likely to have been brought here from the larger shrine south during the quarrying operations and left behind as useless. This had evidently been the fate also of the massive pillar, with bold lathe-turned mouldings, which was found to the south of Kha. ix, only a few inches above the ground, and which the photograph (Fig. 42) shows when set upright. Its close affinity in style to the massive wooden pillars subsequently unearthed in the Endere fort deserves notice.[16] Among painted panels, Kha. ix. 10 (Plate XIV), showing on either side three female figures in varying attitudes, was the least defaced. Though its colours had suffered badly the bold and graceful outlines still remained and showed a pictorial skill equal to that of the best Dandān-oilik panels.

Miscellaneous finds in Kha. ix.

That the narrow apartment to the north of the cella of Kha. ix, with its timber and plaster walls still standing in parts to a height of about one and a half feet, had served for homely uses was proved by the large wooden trough and the roughly cut tripod for a jar found fixed in its floor, as well as by such objects as two wooden boot-lasts, Kha. ix. 0031, 0032, of the type first found at the Niya Site;[17] a number of wooden keys and parts of locks, Kha. ix. 007, 008, 0011–0013; a sandal-wood comb, Kha. ix. 001, etc. The wooden disc, Kha. ix. 0023, with intaglio design on each side (Plate XLVII), is curious on account of its close resemblance to Coptic cake-stamps and as the only object of this kind which my excavations have brought to light. The well-glazed piece of pottery in red and green, Kha. ix. 0018, and the edge of a cup of green glass, Kha. ix. 0022, also found here, may yet prove of value owing to the chronological accuracy with which the period of their use can be fixed.

Rush walls and fence at Kha. xi.

The only structural remains at Khādalik which are left for mention consisted of a small group of detached rooms, Kha. xi, built with plastered rush walls and situated about 180 yards to the south-east of Kha. i. As the plan in Plate 5 and the photograph (Fig. 40) show, the fence enclosing the court-yard around them still partially survived. This fence, about one and a half feet thick, was constructed of layers of twigs and scrub set in mud, after a fashion still known about Khotan under the name of *Chītan-tam*. It was interesting to observe how well this fence and the rush walls of the small dwellings had withstood wind-erosion which had actually lowered the ground in the open court-yard by some three feet below the floor level of the rooms. The top of the fence still rose about five feet above the lowest portion of the court-yard. There was no reason to doubt that these modest quarters belonged to the same period as the shrines. Their survival illustrates the observa-

[16] See below, chap. VII, sec. ii.

[17] See *Ancient Khotan*, ii. Pl. LXXIII, N. xx. 04.

tion, frequently made also at other sites, how much greater the effect of wind-erosion is upon solid structures than upon frail but pliable materials, which offer less scope to the grinding force of driven sand and on the contrary are apt to catch and retain it as a cover.

Traces left by walls completely eroded.

And here I may take occasion to mention a curious feature which shows how, even where the destruction done by the winds has run its full course, a structure carried off by them to the very foundations may yet leave behind its outlines clearly traceable on the ground. Often, when the sun stood low, I noticed that the eroded ground on which my tent stood to the west of the ruins showed up distinct lines marking where the walls, about two feet thick, of some large oblong building had once stood. Close examination of these vestiges proved that the soil was composed there of exactly the same fine loess as elsewhere; in fact, while walking on, or close along, them, they could not be traced at all. The only explanation I could suggest for these strange shadows of walls was that the weight of heavy masses of clay or sun-dried brickwork now completely eroded had given to the underlying soil greater consistency than that found on open ground, and that the slightly different level thus imparted accounted for the faint relief which caught the eye under the slanting rays.

Section II.—ANTIQUES EXCAVATED AT KHĀDALIK

MS. materials still under examination.

Before giving the Descriptive List of the objects which my excavations at Khādalik brought to light, it will be convenient to find space here for some general remarks on the chief classes of antiques represented among them, and in particular to indicate briefly their relation to corresponding finds elsewhere. I regret not to be able to include in this rapid review the manuscript materials recovered from the several shrines. However much my attention was attracted towards them during the actual digging, it was quite impossible for me to find time either then or since even for the most cursory study or description of individual pieces. On the other hand the scholars who since my return have been kind enough to give me the benefit of their expert collaboration on the multifarious manuscript materials contained in my collection, have been kept occupied by the far better preserved and more extensive texts secured from the 'Thousand Buddhas' cave temples and elsewhere, and have not yet been able to devote to the abundant, but unfortunately very fragmentary, Khādalik materials that laborious care which their identification, etc., will require. Nor has it been possible so far to assure at the British Museum for all the manuscript remains that expert treatment which most of them need to become safe for handling.

MS. remains in Sanskrit.

It is in consequence of these facts that at the time of writing I do not find myself in possession of exact inventory notes for more than twenty-three out of the hundreds of larger fragments in Brāhmī script which the collection contains.[1] I owe these notes to the kindness of my friend Professor L. de la Vallée Poussin, who has been good enough to undertake the first analysis of the Brāhmī manuscripts containing Sanskrit texts, and who has already published some of his valuable results in the *Journal of the Royal Asiatic Society*.[2] The fact that all the fragments described in these notes belong to Buddhist canonical texts fully agrees with the conclusion already reached on the spot that these manuscript remains represent votive offerings. Such favourite sacred texts as the *Prajñā-pāramitā* (Kha. i. 81. b, 93, 97, 128, 196, 199. c) and the *Saddharmapuṇḍarīka* (Kha. i. 92, 177; ix. 15) are only too frequent among them. But there are fragments also of a *Buddhacarita*

[1] The total number of separately labelled packets, generally comprising convolutes or broken portions of Pōthīs, amounted to about 230 at the time of packing.

[2] See his Appendix G, and *J.R.A.S.*, 1911, pp. 759 sqq., 1063 sqq.; 1912, pp. 355 sqq.; 1913, pp. 569 sqq.

(Kha. i. 183) and a *Guṇaparyantastotra* (Kha. i. 199. b) which Prof. de la Vallée Poussin has published already *in extenso*.[3]

MSS. in Brāhmī script and 'Khotanese' language.

Of the very numerous leaves written in Brāhmī script, whether of the 'upright or cursive Gupta' type, and in the so-called 'North-Aryan' language, Īrānian in character, the inventory F, kindly promised by Dr. A. F. Rudolf Hoernle, the pioneer student of this language, will furnish adequate details. Meanwhile I must limit myself to the statement that one of the texts in cursive Gupta characters is written on the back of a paper roll, about ten inches high, which was found in two separate and well-preserved pieces, about three feet and one and a half feet long respectively. This contains on its obverse a neatly written Chinese text which has been identified by M. Chavannes as part of a Prajñā-pāramitā version. This procedure of using the good paper of a Chinese manuscript roll for a subsequently copied text in the local language has found ample illustration from manuscripts preserved at the 'Thousand Buddhas'. As if to illustrate further the polyglot character of Khotan Buddhism, a line in Tibetan, too, appears at the bottom of the smaller of the two roll pieces, Kha. i. 221. The find of a Tibetan record on wood has been mentioned already. All the written remains from the site acquire additional interest from the fact that the *terminus ad quem* for their origin can be fixed with certainty at the close of the eighth century A. D.

Style of art finds resembles that of Dandān-oilik.

This chronological fact also helps us to appreciate fully the close affinity which the artistic remains of Khādalik show to those I recovered from the ruined Buddhist shrines of Dandān-oilik; for we know by equally certain evidence that the latter were abandoned at the same period.[4] The uniformity of style is striking both in the sculptural decoration and in what has survived of the wall paintings. Taking the former first, we find all elements of the stucco relievo ornamentation of the walls, familiar from Dandān-oilik, here duly represented. From the vesicas of large images come those abundant fragments of lotus-petal wreaths and flame-pattern borders attached to them on the outside, of which Plates XV, XVI offer typical specimens (Kha. vii. 001–004; Kha. ix. 004; Kha. ii. 0046; cf. also Kha. ii. 001, 002 in List). These as well as other ornamental details, like the bead and lotus-petal border, Kha. ii. C. 004; ii. 0074 (Plate XVI), look almost like replicas of the specimens from Dandān-oilik reproduced in Plates LV–LVII of *Ancient Khotan.*

Appliqué relievos in stucco.

When we turn to the small appliqué relievos representing divine figures, once disposed within the vesicas, the resemblance is quite as strong. Thus exact counterparts of familiar Dandān-oilik relievos may be recognized in the Buddha standing with the hand raised in the Abhayamudrā (Kha. i. 001, with Kha. i. C. 008 in Plate XV); the seated Buddha, as seen in Kha. i. S.W. 0010, Plate XV, and those graceful figures of garland-holding Gandharvīs in flight, of which Plate XV shows specimens (Kha. i. E. 0039; ii. N.W. 005; ii. W. 001). To judge by their frequency—they occur also often in the pose of adoration, as in Kha. ii. N.W. 003, 004, Plate XV (see Kha. i. N. 002)—the latter figures must have been quite as great favourites here as with sculptor-decorators of Dandān-oilik. It need cause no surprise that by the side of figures so closely allied in style there appears also an occasional plaque which, like the seated Buddha, Kha. 05 (Pl. XV), seems to reproduce an earlier type already seen in the appliqué relievos of Rawak or Ak-terek (see A.T. iii. 0089 in Plate VIII; *Ancient Khotan*, Plate LXXXVII).

Finds of moulds used for decorative relievos.

A simple explanation is supplied by the continued use of moulds which in certain cases may have dated back far beyond the erection of the particular shrine. Hence it is of particular interest to note that the ruins of Khādalik have yielded a number of moulds in plaster of Paris (Kha. i. 0015; ii. 0074, 0075; Plate XVI) which must have been actually used for the original

[3] *J.R.A.S.*, 1911, pp. 770 sqq., 1064 sqq.

[4] Cf. *Ancient Khotan*, i. pp. 275 sqq.

reproduction or occasional repair of such frequently recurring details as lotus-petal borders or flame-patterns edging vesicas. In Kha. ii. N. 0014 (Plate XVI) we have actually a mould for a small appliqué Buddha resembling Kha. 05. That the same method was also used for the reproduction of curls, locks, hands, and drapery details in larger images worked in the round, is proved by the moulds Kha. i. 0016, ii. 0076, 0077 ; ii. N. 0013 (Plate XVI).

Remains of stucco images.

The two main shrines must once have contained many statues in stucco, life-size or over, for we found numerous pieces of fingers and hands (Kha. i. 0029; i. C. 0046; i. W. 0014; ii. 0033–0037; ii. N. 001), and fragments from heads (Kha. i. 005; ii. 0020, 0021, 0063) or drapery (Kha. i. E. 0040; ii. 0031, 0032). The complete decay of all larger remains of this statuary must be attributed in the first place to the friable nature of the material, left exposed in all probability for a long time without an adequate cover of sand, and then to the destructive effect of the early quarrying operations. The existence here, too, of the practice of gilding is proved by an abundance of fragments still retaining their gilt (see Kha. i. 16, 29; 005, 0023, 0024, 0033, etc.). It is noteworthy that these fragments seem often to have owed their survival to the support given by a strong backing fabric. In the case of the small appliqué relievos, preservation was obviously due mainly to the hardness of the fine plaster of Paris of which they were made; for of a general conflagration, which could have hardened small relievos, even if made of mere friable clay, through a process of accidental firing, as observed at the Ak-terek ruin, no trace could be found. This is fully confirmed by the analysis furnished in Appendix D by Sir Arthur Church, who found in the specimen v from Khādalik ordinary plaster of Paris without any trace of the effects of a reducing process due to accidental burning such as the pieces of plaster of Paris found at Kighillik near Ak-sipil exhibit.[5]

Painted woodwork.

Positive evidence on this point is afforded by the many pieces of painted woodwork which were found in and near the main shrines. Unfortunately most of these, as already stated, consisted of mere parings purposely split off from the quarried posts and other architectural timber. As a result of this treatment sometimes fragments fitting each other turned up in different places (see Kha. i. N. of C. 007 in List). Figures of Buddhas and Bodhisattvas appear to have been the prevalent subjects for this ornamentation (see e.g. Kha. 005, 006; i. 211. a, 311 (Plate XIV); ii. E. 005, 0013, etc.). The style shows closest approach to the painted work of this class which has survived at Dandān-oilik (cf. *Ancient Khotan*, ii. Plate LXV, D. I. 04).

Painted panels.

The same observation holds good of the numerous painted panels of wood found which, no doubt, had once served as votive gifts. In view of the number of these panels it is a matter of special regret that, owing probably to long exposure without a protecting cover of sand or else to moisture reaching the floor on which they lay, the colours have faded so badly as to make reproduction impossible. Many of them were painted on both sides. A reference to the detailed descriptions given in the List from Mr. F. H. Andrews's pen will show how closely the subjects represented and their pictorial treatment correspond to those in the series of painted panels which more favourable conditions have fortunately preserved for us at the shrines of Dandān-oilik. Apart from figures of Buddha and Bodhisattva, represented singly or in groups (e.g. Kha. 0016; i. 18, 30, 51, 194; i. N. of C. 001, 004; ii. E. 004, 0013), we meet also with those legendary subjects, like the rat-headed deity (Kha. i. C. 0015), the 'horseman and bird' (Kha. i. E. 0034; i. C. 0027), and the 'princess with the cocoons' (Kha. ii. N. 0015), which among the Dandān-oilik finds claimed such special interest as illustrations of ancient Khotan folklore.[6]

Here I may conveniently find room also for a brief reference to the remains of artistic woodcarving which survived among the débris of the main shrines. Apart from balusters such as

[5] Cf. *Ancient Khotan*, i. pp. 477, 587.

[6] Cf. *ibid.*, i. pp. 259 sq., 264 sq., 278 sq.; ii. Pl. LIX, LXIII.

0018; i. 0036; ii. 0083, and the ornamented frieze and base, Kha. i. E. 0044: i. 9, reproduced in Plate XVII, which may all have belonged to the central image base of Kha. i, they include amongst pieces carved in the round a Buddha figure, Kha. ii. N. 008 (Plate CXXXVIII); a lotus-seat pedestal, Kha. ii. N. 0016; and the web-fingered hand of a statuette, Kha. i. 186. A very curious piece, of uncertain purpose, is the large and cleverly naturalistic relievo, Kha. i. E. 0043 (Plate XVII), representing a large-horned mountain-goat.

Remains of wall paintings.

No relics of Khādalik can rouse more regret at the utter wrecking which these shrines suffered than the fragments of frescoes recovered. Distinctly superior in design as well as colouring to most of the Dandān-oilik wall paintings and yet closely connected in style, they give us a tantalizingly scanty glimpse of the pictorial art of Buddhist Khotan which we know to have strongly influenced religious art in China from the commencement of the T'ang period.[7] Of the *disjecta membra* I was able to pick up from the débris of Kha. i, and mainly from the area of its cella, only a selection could be included in Plates XI and XII, and these, too, fail to convey an adequate impression of the rich and harmonious colouring. For this and all details of technique I must refer the reader to Mr. Andrews's full and expert notes in the Descriptive List below. Here it must be noted that all these paintings are done in *tempera*. As to the way in which the backing of clayey loess admixed with vegetable fibre was prepared with a thin smooth layer of plaster of Paris to receive the distemper, the chemical analysis supplied by Sir Arthur Church in Appendix D furnishes interesting information.

The photograph (Fig. 41) taken on the spot shows the largest piece of wall painting which survived, measuring about nine by five feet. This illustrates what, from the considerable number of similar but much smaller pieces found elsewhere, may be taken to have been the usual scheme for decorating the lower portions of the passage walls. It consists of horizontal rows of small Buddhas, each within a separate niche (four by four and a half inches), seated on a lotus cushion and surrounded by a vesica. The robes of the Buddhas are shown red, dark brown, white or cream, and this variation of costume, with corresponding changes in the colours of nimbus, vesica, and background, is utilized to produce a regular diaper of six different types in one row, the uniform representations being so arranged as to form a diagonal line running downwards from the left to the right. The passages of two Dandān-oilik shrines D. II and VI,[8] showed an exactly corresponding decorative arrangement which, no doubt, was produced there as here by the convenient use of stencils.

Subject of large fresco panel.

At a height of about four and a half feet from the floor this part of the passage wall contained the fresco panel reproduced in Plate XI (Kha. i. C. 0097). It was found broken into five main and several smaller pieces. Considering the very friable nature of the wall plaster, I had reason to be gratified by the result of my packing when after the arrival of the fragments in London it was found possible to reunite them in one panel. In the centre is seen a red-robed Buddha, seated in the 'Nyāyamudrā' and flanked on either side by the richly draped Bodhisattva figure which from the flask carried in the left hand may be taken to be some form of Maitreya. The head with its rich black tresses is curiously suggestive of Persian influence. But the graceful drapery of the lower garment and scarf is, like the well-designed figure itself, directly derived from Graeco-Buddhist models. We shall see, hereafter, how closely the frescoes and silk paintings of the 'Thousand Buddhas' of Tun-huang approach the types here represented,

[7] For the important part played in Chinese art history by the Khotanese school which Wei-ch'ih I-sheng, a member of the Khotan royal family, brought to fame in China in the early part of the seventh century, cf. Dr. Hirth's very pertinent remarks in his review of 'Desert Cathay', *The Nation*, xcv. p. 146; also Hirth, *Fremde Einflüsse in der chinesischen Kunst*, pp. 35 sqq.

[8] See *Ancient Khotan*, ii. Pl. III, IV.

In upper part, two portions of flowing stole. Below, part of domed object, decorated with centre band of imbrications outlined in black, with a spot of red or black in each scale. Beneath this band, divided from it by two parallel black lines, is a band of dark red. Depending from lower edge of dome, a series of pennon-like banners, of which the upper part consists of two triangular pieces, the lower (painted green) hanging by its apex to the base of the upper (orange). From base of lower depend two streamers, green and orange. [For examples of such pennons in silk, cf. *Anc. Khotan*, Pl. LXXVII, E. i. 017 and E. i. 016.] All outlines black, with frequently a white line within the black and on one edge of coloured space. Remaining portion of edge of panel chamfered. Rough work. Wood well preserved. $13\frac{3}{8}'' \times 2\frac{3}{8}'' \times \frac{3}{8}''$.

Kha. 003. Fr. of painted panel, faint traces of colour. Prob. part of a head with crimson nimbus. Outlines black. Much defaced. Wood rather soft. $4\frac{7}{8}'' \times \frac{5}{8}'' \times \frac{3}{16}''$.

Kha. 004. Fr. of painted panel, convex in cross-section. Roughly painted red robe with black lines, on green background. Much damaged. $7\frac{1}{2}'' \times 1'' \times \frac{3}{16}''$.

Kha. 004. a. Fr. of painted wood, painted convex side. Roughly split on all other sides. Brick-red lotus with yellow centre, surrounded by ring of white spots. Overlapping this a dull blue lotus. Outlines black. Hard wood. $4\frac{1}{4}'' \times 1\frac{3}{4}''$.

Kha. 005. Fr. of painted panel, split from larger piece. Upper part of Buddha head showing hair, eyebrows, upper eyelids outlined in black; flesh and Tilaka in red. Flesh yellowish. Halo pale pink with red outline. Vesica pale pink, shaded, outlined red. Much defaced. Wood soft. $4\frac{1}{2}'' \times 1\frac{1}{4}'' \times \frac{1}{4}''$.

Kha. 006. Flake from painted panel. *Obv.* Remains of painted head indicated by L. eye and portions of face and hair (black). Flesh yellow. Halo dark to light pink. Much of paint fallen away. *Rev.* Rough. Fairly hard. $5'' \times 2'' \times \frac{1}{8}''$.

Kha. 007. Fr. of painted wood, with light green, red, and pink paint on one side only. Soft. $2'' \times 1\frac{1}{8}'' \times \frac{1}{8}''$.

Kha. 008. Fr. of painted wood, flaked from panel. Traces of red, green, and white paint on one side only. Hard. $3\frac{3}{4}'' \times 1\frac{1}{4}'' \times \frac{1}{16}''$.

Kha. 009. Fr. of painted panel, showing clasped hands and parts of red robe of seated Buddha fig. Much damaged. Fairly hard. $4\frac{3}{4}'' \times 1\frac{3}{4}'' \times \frac{3}{16}''$.

Kha. 0010. Fr. of painted wood with traces of paint on one side. Fairly hard. $4\frac{1}{2}'' \times \frac{5}{8}'' \times \frac{3}{16}''$.

Kha. 0016. (Purchased from Mullah Khwāja.) **Fr. of painted wood.** Part of upper edge broken away. R. end sawn off. Four seated Bodhisattvas, each in pose of meditation, hands in lap. Vesicas green bordered with maroon. *First* (from L.), head $\frac{3}{4}$ to L. p. Simple red robe. Topknot. Padmāsana green with yellow centre. Flesh yellow ochre. *Second*, head $\frac{3}{4}$ to R. p. Tight-fitting upper garment, prob. red, with yellow band at neck. Loin-cloth dark red. Stole dark green. Flesh dark pink. Padmāsana green ray, yellow centre. *Third*, head $\frac{3}{4}$ to R. p. Otherwise as first. *Fourth*, as second. Bangles visible. Long hair. Dark red ground between vesicas, powdered with flowers. Badly damaged. $20\frac{5}{8}'' \times 6\frac{3}{4}'' \times \frac{5}{16}''$.

Kha. 0017. Fr. of carved wood. At top end projecting tenon. Back flat and rudely finished. In front at top a square mortice. Below this wood is cut away in three step-like mouldings in front and on R. side. L. side flat but with upper edge bevelled. Below, flat plain surface. Bottom edge broken. $5\frac{3}{4}'' \times 2\frac{1}{4}'' \times 2''$. Pl. XVII.

Kha. 0018. Part of wooden baluster, turned. Only about 80° of surface preserved. Quite rotten. Length $7\frac{3}{4}''$; diam. orig. *c.* 5″.

Kha. 0019. Bronze seal. Intaglio design. Double-ended Y with dot in each space made by arms. Cylindrical pierced handle behind. Square, with two sides indented. $\frac{1}{2}'' \times \frac{1}{2}'' \times \frac{5}{16}''$.

Kha. 0023. Stucco relief fr. of flame pattern; (?) two rows of flames. From mould similar to Kha. i. 0028. Traces of white slip. Clay red, friable. $3\frac{1}{4}'' \times 2\frac{1}{4}''$.

Kha. 0024. Piece of wooden baluster, exact match with Kha. ii. 0083. $8'' \times 2\frac{3}{4}'' \times 1\frac{3}{4}''$. Pl. XVII.

Kha. 0025. a, b. Two frs. of painted wooden panels. On (*a*) drapery, red and white against a brown ground; on (*b*) traces of black and red lines on white ground. (*a*) $3\frac{3}{4}'' \times 1\frac{1}{2}''$; (*b*) $4'' \times 2''$.

Kha. 0026. Fresco fr., much broken. R. forearm and hand and part of torso of Buddha, in pose of argument. Style of work is strongly marked and is unusually Perso-Chinese. Fingers long, excessively tapering and recurved at tips, with very definitely marked web extending in graceful loops between top joints (articulations) of thumb and first two fingers. Between second and third it is not shown, perhaps because of the small space. The fourth finger is missing and painting defaced close up to third. In palm, sacred mark shown as a ring surrounded by small spots. At neck, necklace painted in outline, consisting of beads with larger circular ornaments at intervals. Bangle on wrist; on forearm, occupying its whole length, is represented in outline a long Vajra, from which sprout three simple leaf forms at the visible end (other end missing) and four similar forms from the centre—two on each side. Pink and light green robe has border passing from L. shoulder (missing) to R. armpit, consisting of a delicately outlined leaf pattern, tinted with blue and pink. All outlines red except those of drapery which are black. Remaining surface in good state. $5\frac{1}{2}'' \times 3\frac{1}{2}''$. Pl. XI.

Kha. 0027. Fresco fr. To R. the figure of a man dressed in white robe with sleeves, stooping forward to L. L. arm extended downward (hand missing); R. hand grasps object which looks like a black-handled flaying-knife, or razor, and which he holds on level with face. Behind him a second figure partly visible.

Portion of scroll ornament and three horizontal lines, all in black, to L. Flesh very red. Contours red. Hair grey. $6\frac{1}{4}'' \times 4\frac{3}{4}''$. Pl. XI.

Kha. 0028. Fresco fr. Bodhisattva seated on red lotus, cross-legged; body above hips turned $\frac{3}{4}$ to R. p. R. arm upraised from elbow. Hand broken away. L. arm rests on L. thigh; hand out-turned, pendent, holds between fingers long-necked flask with ovoid body enriched with horizontal bands and vertical petals. Flask hangs exactly between crossed feet which are exposed. Part of body above hips nude. Rich necklet and bracelets (yellow). *Dhōtī* enveloping legs, bright blue, with black contour lines over red. Red stole depends from R. shoulder and is draped over right thigh. Portion of other end visible at extreme broken edge of fr., falling inwards over L. forearm. Body long and slender, with well-defined waist. Head and L. elbow broken away. Behind fig., a light green vesica bordered with bands of brown and red. Outside vesica the ground appears light blue.

To extreme R. p. of fr., head and shoulders of small fig. turned $\frac{3}{4}$ face towards R. p., and with eyes in same direction. Black short hair. Red-brown garment covers L. side. Background of fig. grey, bordered with vertical band of red. A dark brown object in foreground to L. p. of small fig., and above, a loop of white drapery.

All flesh pale pink. Flesh contour lines red. Drawing very good, although rapid. Colours fresh but abraded. $6'' \times 5''$. Pl. XI.

Kha. 0029. Fresco fr., showing R. hand holding brush, shoulder and part of breast of female (?) fig. wearing rope of pearls round neck, and large pendent pearl. A thin, close-fitting grey vest is worn, with tight sleeve-band at armpit. Below this the sleeve is white decorated with four-petalled green flowers with pink centres. Rope of pearls is painted red with white spots. Brush handle broadens at the butt, is cut askew, and probably forms a burnisher. It is held in the present day Chinese manner—between thumb and first finger, middle fingers closed down on to palm, little finger outstretched. Forearm is directed upward and hand is practically vertical. Whole action of painting with fingers and wrist, arm being held almost rigid.

Form of hand and fingers very refined. Whole outlined black, with black background, broken by ornamental frs. Abraded. $6'' \times 3''$. Pl. XI.

Kha. 0030. Fresco fr., prob. part of upper portion of leaf-and-berry pattern at top of Kha. i. E. 0047. To L. p. outstretched wing and part of breast and foot of green bird (? goose). Frs. of ornamental details to R. p. and above. Much abraded. $4'' \times 3''$. Pl. XI.

Kha. 0031. Fresco fr., prob. portion of arm of fig., with yellow armlet, decorated with rolled-over leaves of a type common in Romanesque work in Europe and in Gothic stained glass. The treatment line for line, and the rounding of points show absolute similarity with Gothic glass painting. The second motif on this piece, a band of circles and V-shaped spandrel fillings, is equally Gothic. Condition good. $2\frac{3}{4}'' \times 3\frac{1}{4}''$. Pl. XII.

Kha. 0032. Fresco fr., showing two rolled-over 'Gothic' leaves, green on one side, pink on other, outlines black and white. From between leaves a flower springs with roughly pear-shaped base, dark red with yellow edge, from which petals seem to radiate. Broken away all round. Painting in fresh condition. $2\frac{3}{4}'' \times 2\frac{1}{4}''$.

Kha. 0033. Fresco fr., with upper half of standing fig. holding in R. hand, upraised to shoulder level, a blue globular object. In L. a long slender staff with a ring at upper end. Evidently Kshitigarbha with jewel and beggar's staff; see Ch. 0021. Long robe divided up into a brick pattern, with length of bricks in the vertical direction, by bold red bands. Red centre occupies each brick, the outer part being dark grey. Border of robe grey and bright green. Over head and hanging on shoulders a dark brown drapery. Head $\frac{3}{4}$ to R. p. Flesh dark brown, nimbus red with yellow spots, vesica bright green, with double border divided by red and yellow lines. The inner border is composed of upward sharp-pointed imbricated sections, green and red. The outer, on green ground, is composed of equal-spaced red spots, outlined yellow and red, attached to inner margin, with three small yellow spots grouped on the outer side of each. General ground outside vesica border light blue with delicate white pattern.

Quality of work good. Style unusual. Vehicle used with colour seems to have been a heavy mucilage. $5'' \times 5\frac{1}{4}''$.

Kha. 0034. Fresco fr., showing R. elbow and portion of standing fig. (Kshitigarbha ?) in red-brown robe with thin black staff across body. At chest a dark grey object (broken away) with narrow plaited bands at bottom in yellow. Flesh pink. Vesica light green spotted with yellow, bordered with pattern similar to outer band of Kha. 0033, but on dark ground. Work and technique also similar. Surface rather chipped. $3'' \times 3\frac{1}{2}''$.

Kha. 0035. Fresco fr., showing two of a series of seated Buddha figs. Lower part missing. Colouring of fig. to L. p.: red robe; grey vesica bordered red with white outlines; pale green background; nimbus dark green, bordered with shaded pink. R. p. fig.: fine blue robe; buff vesica with dark green border outlined red and buff; nimbus similar to first; background red. Moderately well executed. Fair preservation. $9'' \times 4\frac{1}{4}''$.

Kha. 0036. Fresco fr., showing portions of two Buddha figs., one above the other; part of series. Upper fig. in red robe, turquoise vesica, straight Padmāsana. Lower (head only), red vesica, turquoise nimbus. $4\frac{1}{4}'' \times 4\frac{1}{2}''$.

Kha. 0037. Fresco fr. of seated Buddha fig., prob. one of series. R. side only. Red robe, buff vesica. $3\frac{1}{4}'' \times 2\frac{1}{4}''$.

Kha. 0038. Fresco fr., showing upper part of standing Buddha fig., in pink robe, edged white. R. hand to breast, palm out; L. hand grasps hem of robe. Head ¾ to R. p. Nimbus dark grey with pink border; vesica pale green with pink border outlined white; contour lines red. The hands are painted on dark patches of pink which seem to be due to extra sizing preparatory to painting the hands, the surrounding colour by abrasion having become lighter, while extra size has caused the patches to darken. Same effect appears at neck of robe. General ground grey blue, on which to L. p. is shaded pink lotus, partly broken away; and other detail just visible. 7¾″ × 5″.

Kha. 0039. Fresco fr. of floral background (?). Three ovoid shapes,—two pink, banded across with darker pink, and white dots on the lighter colour; one blue, similarly treated,—meet with their ends at a central point. Below, a stem (?) and on each side a green leaf outlined yellow. Good work. 2½″ × 2¼″.

Kha. 0040. Fresco fr. of ornamental detail. On one side a broad plain red band; above, leaf and petal forms outlined in black. Very rough. 4½″ × 3″.

Kha. 0041. Fresco portion of angle of wall, showing two painted surfaces covered with diaper of small seated Buddha figs. Predominating colour red. A band of purple brown, *c.* 1″ wide, on which are circles of white dots regularly spaced, forms border to one surface. 19″ × 8½″ × 4½″.

OBJECTS EXCAVATED AT RUINED SHRINE KHA. i

Kha. i. 9. Fr. of roughly carved wooden base (?). From point of centre leaf of an irregular five-leaved palmette rises a stalk carved with inverted imbrications. On each side of stalk, a descending acanthus leaf, the veins bending slightly outwards. The vein on each side of palmette takes an ogee curve. All leaves deeply incised with a V-shaped cut. On R. p. side a series of horizontal cuts give a vague resemblance to masonry. The centre leaf of palmette might also be intended for a lotus bud hanging downwards from the stalk described. Traces of colour. At base of palmette, a small wedge-shaped incision. Broken at both sides. Wood soft. 6⅛″ × 5″ × 1¾″. Pl. XVII.

Kha. i. 16. Plain gilt stucco, two small frs. of, from wall. Marks of fabric backing behind. (*a*) 1″ × 7/16″ × *c.* 3/32″; (*b*) ¾″ × ½″ × ⅛″.

Kha. i. 18 + Kha. i. 1. a. Two frs. of portion of painted wooden panel. *Obv.* R. p. corner intact. Two edges broken away. In a vesica bordered with pearl orn., a seated Buddha fig.; only R. hand and wrist, upraised to shoulder level and holding some object (obscure), are visible on the larger fr., and the R. eye and part of forehead with Tilaka and pearl nimbus on the smaller. Within pearl border of vesica a parallel band of chevrons in alternate red and green, divided by black lines. Within this band the field of vesica appears to be green. Ground of panel light blue; above vesica is a canopy of feathers in three horizontal rows, imbricated; the first and third rows pink, the middle row dark grey with a kind of eye composed of two bright red spots encircled by a white line. Quill in each feather white. The rows of feathers stop short at edge of vesica, and above them is a band of chequer in yellow and white, outlined black. The whole canopy as far as visible has a convex outer edge. In corner of panel is a device in a roughly circular halo of yellow with red rays. *Rev.* Part of pink halo on dark red vesica outlined white. Background blue, changing to pink. In corner a white pointed vesica, with roughly drawn flower stalk and leaves, the flower coming on the blue and being painted white. Much damaged. Soft. 5½″ × 2″ × 5/16″; 3¼″ × ½″ × 5/16″.

Kha. i. 27. b. Fringed fr. of coarse fabric, pinkish-red. Discoloured. 4⅝″ × (with fringe) 3″.

Kha. i. 29. Fr. of plain gilt plaster stucco, as Kha. i. 16, sticking to strip of backing of usual light buff fabric. Backing 4¾″ × (greatest width) 1⅛″.

Kha. i. 30. Fr. of painted panel. Parts of lower and one side edge intact; broken elsewhere. *Obv.* Fig. wearing elaborate head-dress and necklaces, and holding some circular object, seems to be seated on lotus. Large halo behind head. All very indistinct. *Rev.* Buddha fig. with short black hair, ūrṇā, long ears; dressed in single ample robe, seated on Padmāsana. Flesh prob. yellowish pink. Usual black and red lines. Double halo. Above, a second Padmāsana, but too defaced to discern details. Upper end of fr. damaged by fire. 11″ × 1¾″ × ¼″.

Kha. i. 31. Part of pennon. Square of faded plum-coloured 'Khām'. Edges have been turned in, square folded diagonally, and sewn along sides. Inside, along base of triangle so formed, small stick was sewn. Perhaps part of pennon; cf. *Anc. Khotan*, Pl. LXXVII, E. i. 017. Dirty and discoloured. 5⅛″ sq.

Kha. i. 42. Fr. of painted panel split off larger piece. Buddha head, ¾ to R. p. Flesh yellow, eyebrows, upper eyelids, hair (short) black. Flesh contours and outline of nimbus red. Tilaka red. Elongated ears. Nimbus white. Background crimson. Well preserved. 6″ × 2½″ × ½″.

Kha. i. 51. Fr. of painted panel. Portions of top and one side complete; elsewhere broken away. *Obv.* Black lines indicating vesica, within which, on a blue ground, portion of upper- and forearm of a fig. in dark red robe with white (?) stole round upper arm. Very defaced.

Rev. Head (defaced) and portions of drapery of Śakti (?). Flesh pink, drapery bright green. Necklet. Over R. shoulder an arm is thrown, of which colour is dark grey. Held between thumb and fingers a fruit. Another arm of same dark colour appears to extend upwards on same side. Hair of Śakti is dressed rather high and is black, adorned with light lotus orn. Nimbus grey green. Behind and above green nimbus is red bordered by green with dividing lines of black. Whole badly defaced. Fairly hard. $10\frac{1}{2} \times 1\frac{3}{4}'' \times \frac{3}{8}''$.

Kha. i. 60. Fr. of painted wood, with portion of fig. in dark red robe on green cloud. Very rough. Hard. $8\frac{3}{4}'' \times 1\frac{1}{2}'' \times \frac{1}{2}''$.

Kha. i. 87. Piece of painted silk (in frs.), found sticking to board. Shows five lotus leaves (green, with pink central vein edged with black) springing round pink flower-centre, with pink background; part of Padmāsana. Very brittle. Also scrap of pinkish-brown silk (?) damask. Painted silk (largest fr.), $1\frac{1}{4}'' \times \frac{9}{16}''$. Damask, $1\frac{1}{4}'' \times \frac{1}{4}''$.

Kha. i. 186. L. hand of wood statuette. Second finger bent over to meet thumb. Other fingers slightly bent. Cut off slanting at wrist where projecting dowel, and traces of glue. Covered with whitish slip to take paint. Between first, second, and third fingers a network of light red lines, to represent webbing. Length $3\frac{1}{4}''$; across knuckles $1\frac{7}{8}''$.

Kha. i. 194. Fr. of painted panel. *Obv.* To R., fig. in dark red robe seated on bolster-shaped cushion. Light green and yellow drapery seems to hang from neck and shoulders. Hands and feet not visible. Cushion cover, chessboard pattern, white with alternate green and red spots. To L., fig. in dark grey *dhōtī* and green stole, otherwise nude; seated, R. leg in the usual cross-legged position, but L. raised in curious attitude bringing foot on level with head. Body is inclined strongly to L., and arms with elbows well out are bent, bringing hands towards face. A bangle on R. wrist. Flesh pink. All outlines (including flesh) black. Background white. Head and upper part of each fig. missing. Surface much destroyed. *Rev.* blank. A small hole for peg near lower edge. Wood hard. $6'' \times 2\frac{1}{4}'' \times \frac{7}{16}''$.

Kha. i. 194. a. Fr. of painted panel. Parts of two original edges; broken away on other edges. *Obv.* Discoloured and fragmentary remains of borders of nimbus and long vesica of prob. a standing fig. in green robe. Nearly all other paint completely perished from fire. Surface of wood charred and soft. *Rev.* Blank. Chamfered on the long edge. Soft. $10'' \times 2\frac{1}{2}'' \times \frac{1}{2}''$.

Kha. i. 195. Fr. of painted wood, split from thicker piece. L. edge chamfered. Broken away at upper and lower ends, and at R. side. R. side of fig. seated or kneeling, prob. in attitude of adoration. Hair, black, hangs behind shoulder, and is dressed on top with white bands and leaves. Flesh dull yellow. Loin-cloth dark red. Scarf pale green. Neck and arm ornaments white. Nimbus outlined black and white. Flesh contour lines black (unusual). Cloud-like support pale green and pink. Hard. $17'' \times 3'' \times \frac{1}{2}''$.

Kha. i. 211. a. Fr. of painted wood, flaked from larger piece. Face and neck of seated Buddha, $\frac{3}{4}$ to R. p., same treatment as Kha. i. C. 0017. Lower edge of fr. shows chamfered surface on which the paint is continued. Much of painted surface flaked off. $2\frac{3}{4}'' \times 1\frac{1}{2}''$.

Kha. i. 311. Painted panel. Small irregular oblong, roughly tapering at upper and lower ends. Seated Buddha in bright red robe. Head $\frac{3}{4}$ to L.; hands in lap. Top-knot and eyebrows (which meet over bridge of nose) black. Tilaka and all outlines red. Flesh a strong rose pink. Padmāsana roughly indicated, and below a roughly sketched grotesque (?) fig., in black outline only. Main fig. has nimbus and vesica indicated by red lines only. Traces of priming all over panel. *Rev.* Top and one side roughly chamfered, on the side chamfer some scribbling in ink. Hard and well preserved. $5\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{3}{8}''$. Pl. XIV.

Kha. i. 312. Fr. of pottery; rim of large stone jar; rim turned out at right angles to neck and squarely moulded. On flat upper surface of rim are two Sanskrit Akṣaras खर. Slightly gritty brick-red ware; wheel-made. $9\frac{3}{16}'' \times 2''$.

***Kha. i. 001. Stucco relief fr.** One of many from series of small figs. of Buddha, prob. from large vesica; cf. *Anc. Khotan*, Fig. 64, R. xiii. Fig. stood upright on lotus pedestal, L. hand by side, R. hand raised in attitude of protection. Body and arms wrapped in mantle, clinging closely to body and rendered with close narrow grooves; under-garment shows by feet. Plain nimbus, green; hair black; flesh white with red and black markings (Kha. i. C. 0042); mantle red; under-garment green or black. H. without pedestal 6″. All of white stucco.

From same mould: Kha. i. 002, 006, 0010; i. C. 006, 007, 008 (Pl. XV), 0042, 0047–50; i. E. 001, 0010, 0012, 0013, 0015; i. W. 004, 005, 006, 0011, 0021, 0022; ii. S.W. 001, ix. 006.

Kha. i. 003. Fr. of turned wooden baluster, *c.* $\frac{1}{4}$ of circumference. Plain rings, sq. wedge and curved in section. H. $5\frac{1}{4}''$.

Kha. i. 003. a, b. Stucco relief frs. of bead and lotus-petal border. Traces of red paint. $1\frac{5}{8}'' \times 1\frac{3}{4}''$.

Kha. i. 004. Stucco relief fr. of standing Buddha. R. hand raised in attitude of protection. Only R. shoulder and breast remain. Scale as Kha. i. W. 0012. White stucco. $2\frac{3}{4}'' \times 1\frac{1}{2}''$.

***Kha. i. 005. Stucco relief fr.** of human hair. One of many. Hair represented by small 'snail-shell' spirals in low relief. Made on linen ground with backing of clay mixed with straw. Painted dark blue with strips of gold leaf $\frac{1}{2}''$ wide. All of white stucco. Kha. i. 005. Five curls, dark blue with gold strip. $2'' \times 2''$.

From same mould: Kha. i. C. 0044; i. E. 007, 0021, 0022, 0023, 0024–27, 0029, 0030; i. W. 003; ii. 0072.

Kha. i. 007. Stucco relief. Circular plaque with seated Buddha on cushion; hands in lap. Surface much corroded. Same mould as Kha. ii. 0067. Diam. 2¾".

Kha. i. 008. Stucco relief fr. of lotus. To its seed vessel is attached the base of a pod (coloured blue) from which would spring further growth. A frequently used motif in Roman, Mediaeval Italian, and Indian art. White stucco. 2½" × 2". Pl. XVI.

Kha. i. 009. i. C. 0012 (joined). Stucco relief fr. of lotus wreath round vesica; painted crimson and dark blue; colour well preserved. Cf. Kha. ii. 002, but with single plain fillets and two rows of petals between them. Cf. Kha. i. W. 008. White stucco. 6⅛" × 1⅜".

Kha. i. 0011. Stucco relief fr. of background showing between two projecting ridges now broken away. Gilded, with red lines over gilding. Of colouring little remains. White stucco. 2¾" × 2⅛".

Kha. i. 0011. a. Stucco relief fr. of jewel orn. On background are alternately one large and two small applied studs. White stucco. 2½" × 1¾".

Kha. i. 0012. Stucco relief fr. with one large and two small studs, as Kha. i. 0011, to which it has been re-joined. White stucco. 1¼" × 15/16".

Kha. i. 0013. Stucco relief fr. of 'bead and lotus-petal' border. Cf. Kha. i. E. 003; i. S.W. 005 (similar but different moulds). White stucco. 3" × 1⅞".

***Kha. i. 0014. Stucco relief fr.** of 'bead and lotus-petal' border orn. Leaves curve slightly outwards to front. Traces of crimson colouring on leaves. Cf. Kha. i. E. 003; i. S.W. 005. White stucco. 1 13/16" × 1 9/16".

From same mould: Kha. i. W. 0016.

***Kha. i. 0015. Fr. of plaster mould** for vesica with flame-pattern border. Hard white plaster of Paris. 3¾" × 5¾".

From this mould are taken Kha. ii. 001, 003, 0015, 0016, 0024, 0025, 0026, 0043–51. Replica of Kha. ii. 0075.

Kha. i. 0016. Fr. of mould, for band of crescent-shaped locks of hair. Cf. A.T. i. 0030. Hard white plaster of Paris. 5" × 2¾". Pl. XVI.

Kha. i. 0017. Wooden modelling spatula, flat, thin. The handle end is pierced for a cord. The working end is broadened and worked to a sharp edge; the ends of blade rounded. Looks like pear-wood. Hard and well preserved. 6¼" × 1⅜" (blade end) to ⅝" (handle end); ⅛" thick.

Kha. i. 0018. Fr. of painted wood, showing representation of pendent triangles joined apex to base (cf. Kha. 002). Soft. 2⅝" × ⅝" × 1/16".

Kha. i. 0019. Fr. of painted wood, with traces of painting representing a dome-shaped canopy with pendent triangles (cf. Kha. 002). Hard. 8¾" × 1 1/16" × ¼".

Kha. i. 0020. Fr. of painted wood, showing R. elbow, thigh, portion of nimbus and of cloud-like Padmāsana. Black outlines, with traces of pink, yellow, and white. Very rough execution. One edge chamfered. Lower edge cut, other edges broken. Hard. 7" × 2½" × 9/16".

Kha. i. 0022. Stucco relief fr. Head of Buddha, like Kha. i. C. 0040. Top of vesica only preserved. This red with black outer edge. Hair black. White stucco. 2¼" × 2⅛".

Kha. i. 0023. Sheet of canvas backing to stucco, 1/16" thick. Part which still adheres is gilt. 6½" × 3¾".

Kha. i. 0024. Fr. of plain gilt stucco with piece of backing, as Kha. i. 29. Stucco, 1" × 7/16" × ⅛"; backing, greatest length 3"; greatest width 2".

Kha. i. 0025. a, b. Two frs. of cloth from W. of S. platform. (*a*) Loosely-woven light buff 'Khām', showing part of design (leaves?), painted in black, and remains of pink paint over background. One edge turned over and sewn. 3" × 2". (*b*) Strip of pale buff fabric of same kind, finer but strong. Plain. 3½" × ¾".

Kha. i. 0026. Two frs. of painted silk, unusually fine texture; one showing R. hand apparently uplifted, reddish-pink outlined black. Adjoining it part of light blue flower or ornament with leaves, one blue outlined black, one buff outlined red. Other fr. painted buff, red, and black, but too small to show subject. Gr. M. 2" × 1¼". With this, piece of brown woollen fabric, 'braid' texture, rather fine. Gr. M. 6½".

Kha. i. 0027. Stucco relief fr. Tip of very large lotus petal; lobes and central rib prominent. *Rev.* backed with canvas on which thin coat of plaster, painted pink. White stucco. 4½" × 4½" × ½".

***Kha. i. 0028. Stucco relief fr.,** flame pattern, arranged in triangular mass prob. from shoulder of large fig. Clay red and friable. Cf. A.T. 0016. 6½" × 3½" × ½".

From same mould: Kha. i. S.W. 0012.

Kha. i. 0029. Stucco relief fr. First and second fingers of colossal R. hand. Cf. Kha. i. C. 0046. Mark of canvas backing behind. White stucco; traces of gilding. Gr. length 4".

Kha. i. 0030. Stucco relief fr. of lotus wreath; two petals, stamen and binding. Traces of green. Same mould as Kha. i. C. 0045. White stucco. 2" × 1¼" × 11/16".

Kha. i. 0031. Stucco relief fr. of head of Buddha, R. Part of halo to R. Features defaced. No colour. White stucco. H. of head *c.* 1½".

Kha. i. 0032. Stucco relief head of Buddha. Features defaced. Traces of black on hair. White stucco. H. of head 1⅛".

Kha. i. 0033. Stucco fr., painted with rectangular pattern of gold lines on black ground. Paint applied to stucco 1/16"

thick, which is backed with canvas, which again is backed with clay bound together with straw. Surface flat. $\frac{7}{8}'' \times \frac{5}{8}''$.

Kha. i. 0034, 0035. Stucco relief frs. of two similar jewel ornaments. 0034 is part of centre and border. 0035 is centre with trace of border. Red clay mixed with fibre. Dimensions complete $2\frac{1}{2}'' \times 2''$.

Kha. i. 0036. Fr. of turned wooden baluster (about $\frac{1}{6}$ of circumference). A grooved ball-moulding above; then single wedge-moulding, below which a flat ring moulding with double groove and ridge round middle. Fr. of tenon above. H. 5″, orig. diam. *c.* $3\frac{1}{2}''$.

Kha. i. 0036. a. Fresco fr. Upper portion of L. ear of Bodhisattva (?) and part of head (blue) above. On R., part of nimbus, enriched with green, white, and blue leaves on red ground. $5'' \times 2\frac{7}{8}''$.

Kha. i. 0037. Fr. of pottery, red clay, covered with thin bright green glaze. $1\frac{3}{4}'' \times \frac{3}{4}''$.

Kha. i. 0038. Fr. of painted panel. Ground yellow. Flower (?) design, white with dark red outline, and part of drapery (?) in red and pink. $5'' \times 1\frac{1}{4}''$.

Kha. i. 0038. a. Fresco fr. To L., L. side and hand and part of vesica of standing fig. of Buddha. Red robe; vesica has horizontal red and white, and white and green, bands alternating, separated by brown lines; and red and black border. To R., border of vesica of larger fig., maroon. Background: above, green and blue with white floral spots; below, red, with thin white horizontal line between upper and lower parts. $8\frac{3}{4}'' \times 5''$.

Kha. i. 0039. Fresco fr. Blue tassel (?) on maroon ground, with white dots arranged in loops. On one side a piece of quilted orn. resembling that on Kha. i. E. 0051, of which it prob. forms part. $5\frac{1}{2}'' \times 4''$.

Kha. i. 0040. Fresco fr. Part of head of Buddha looking L. Flesh white, outlined red. Eyebrows and eyes black. Nose, ears, and mouth missing. $2\frac{1}{4}'' \times 1\frac{3}{4}''$.

Kha. i. 0041. Fresco fr. L. eye and ear of head of Buddha. Eye black, flesh white, outline red. $1\frac{1}{2}'' \times 2\frac{1}{4}''$.

Kha. i. 0042. Fresco fr. Part of Padmāsana and feet of fig. standing on R. $2'' \times 1\frac{3}{4}''$.

Kha. i. 0043. a, b. Two frs. of same fresco. (*a*) Part of Bodhisattva. Jewellery shown in red outline with blue and green spots, and gilding on raised portions. (*b*) Shows three fingers of R. hand and part of necklets, with traces of gold. $3\frac{1}{4}'' \times 2\frac{3}{8}''$; $4\frac{1}{2}'' \times 2\frac{1}{2}''$.

Kha. i. 0044. Fresco fr. Floral (?) pattern outlined in red and white. $1'' \times 1''$.

Kha. i. 0045. Fresco fr. of Buddha fig., exactly resembling Kha. i. 0046. Much broken. $2\frac{3}{4}'' \times 2\frac{1}{2}''$. Pl. XI.

Kha. i. 0046. Fresco fr. much broken. Fig. of standing Buddha in dull red robe. R. hand in pose of protection. L. hand grasping robe. Web between thumb and forefinger of R. hand clearly expressed. Sacred mark in palm. Head $\frac{3}{4}$ to L. p. and very slightly down. Eyes drooping. Ears long. Tilaka. Horizontal folds in neck. Upper part of head and all below knees missing. Nimbus dark grey or faded green. Vesica light green, bordered dull red. Contour lines red. Eyebrows black. Edges of robe expressed in white lines. Execution rapid but good. Surface much scaled. $6'' \times 3''$. Pl. XI.

Kha. i. 0048. Fresco fr. To L. maroon border of large vesica. To R. green Padmāsana, and feet of standing fig. in maroon robe with white border-design. Background red. $5'' \times 5\frac{1}{2}''$.

Kha. i. 0049. Fresco fr. Above, part of green lotus throne. Below, two rows of Brāhmī chars., black on red ground. See Appendix F. $2'' \times 2''$.

Kha. i. 0050. a, b. Two frs. of same fresco. Portions of a vesica R. side, with border brown and red, inside which are slanting bands, green, white, and blue. Background red. $6\frac{1}{2}'' \times 5\frac{1}{4}''$; $5'' \times 5''$.

Kha. i. 0051. Fresco fr. Uncertain. Part of red, blue, white, and green striped orn. on black, brown, and red ground. White border. Bad condition. $6\frac{1}{2}'' \times 4\frac{3}{4}''$.

Kha. i. 0052. Fresco fr. Drawing in buff outlined red. Ground white. Below, two Pōthīs (?) tied by three green bands. Above, and to each side of these, detached radiating leaves. $4\frac{1}{2}'' \times 3\frac{3}{4}''$.

Kha. i. 0053. Fresco fr. On crimson ground, part of nimbus (green-grey) and hair orn. with lotus of Bodhisattva. Above and to R. of fig., part of green tree, with brown stems. $3'' \times 3\frac{1}{2}''$.

Kha. i. 0054. Fresco fr. showing roughly sketched head of Buddha fig. Outline in red, flesh yellow. Hair, eyebrows, upper eyelid, and eye, black. Haloes roughly washed in. Whole evidently tentative sketch. Condition rather abraded. $9\frac{1}{2}'' \times 9''$. Pl. XI.

Kha. i. 0055. Fresco fr. Head of Buddha, $\frac{3}{4}$ to R. p. Yellow flesh, outlined red. Black vesica on green background. Very good drawing. $2'' \times 2\frac{3}{4}''$.

Kha. i. 0056. Fresco fr. Uncertain design, blue, brown, red, and green. $3\frac{3}{4}'' \times 2''$.

Kha. i. 0058. Fresco fr. Part of Bodhisattva. Below, part of a maroon robe. Outlined orns. hanging on bare flesh above. Flesh white. $3\frac{1}{2}'' \times 3\frac{1}{4}''$.

Kha. i. 0059. Fresco fr. showing portion of head of Bodhisattva, $\frac{3}{4}$ to L. p., slightly down; eyes long and full, downcast with dreamy expression. Nose and mouth small. Eyebrows thin, long, highly arched at outer ends, nearly meeting over nose. Tilaka. Ear (broken away) prob. elongated. Hair long and black in knot behind mukuṭa, which bears Dhyāni-Buddha orn., and is enriched with pearls. Drawing of Dhyāni-Buddha, unusually conventional. No lotus seat, but a roughly ornamental treatment with sq. jewel as centre. Halo dark grey, green, or black

bordered, outside which pink, and then blue with thin white line between.

Technique of painting shows great care. The flesh is extremely delicately shaded over the flat flesh-pink with transparent washes of red-brown. Flesh contours are in red outline, with black for under line of upper eyelids and to deepen the outer angles of mouth. The lips are shaded with red-brown. White of eyes carefully and exquisitely shaded with grey-blue. Pupil black. High lights are finally added in pale flesh-pink on upper line of upper lip; round nostril and wing of nose; down contour line of nose (which sweeps round on under-side and round one side of cleft in upper lip, joining the line over upper lip); on upper and lower lines of upper eyelid. All this careful work on flesh is in marked contrast with roughly indicated details of mukuṭa, and is certainly by different hand. 8″ × 5½″. Pl. XII.

Kha. i. C. 001. Stucco fr. with traces of gold leaf. Slightly concave face. At back, remains of canvas backing with thin layer of stucco. 2$\frac{3}{16}$″ × 1″.

Kha. i. C. 002. Stucco relief fr. of human heel and ankle. Core of grass or rushes. White stucco. 2¼″ × 1¾″.

Kha. i. C. 003. Fr. of pottery, from junction of neck and body of vessel. Junction marked by narrow collar of short vertical bars, like milled edge of a coin. Glazed outside and partly inside with smooth dark green glaze. 2¾″ × 1½″.

Kha. i. C. 005. Stucco relief fr. from lotus wreath. Traces of orange colouring. Cf. Kha. ii. 002, but with single plain fillets and two rows of small petals between. White stucco. 4¼″ × 1⅞″.

Kha. i. C. 008, i. E. 0010, i. W. 006 (joined). Stucco relief of standing Buddha (complete). All colours well preserved. See Kha. i. 001. 7″ × 2½″. Pl. XV.

Kha. i. C. 009. Stucco relief fr. Upper part of Gandharvī; both arms (outstretched) and body below breast lost. Hair painted black, close-fitting bodice greyish-blue. Fig. wears cross-belts, incised. White stucco. 2″ × 2½″.

***Kha. i. C. 0010. Stucco relief fr.** of bead and lotus-petal border; apparently from same mould Kha. i. W. 007. Traces of crimson colouring. White stucco. 1″ × 1$\frac{13}{16}$″.

***Kha. i. C. 0011. a, b. Stucco relief frs.** Flame pattern, from border of vesica. One of several, showing three rows of overlapping flattened S-shaped flames with depressed central rib. Painted red, green, and blue. Low relief. Cast in large pieces. (*a*) 3⅝″ × 2½″; (*b*) 3″ × 3¼″.

From same mould: Kha. i. E. 004, 005, 0016, 0041. All in white stucco.

Kha. i. C. 0013. Stucco relief. Plaque consisting of circular lotus, with recurved petals. The flat seed vessel forms a vesica on which is modelled a Buddha fig. in pose of meditation. Behind head a halo. Face broken away and feet. Traces of thick whitewash. Hard white plaster; abraded. Diam. 3″. Pl. XVI.

Kha. i. C. 0014. Fr. of painted wood. Very small portion of painted surface. Toes of L. foot standing on green lotus (?) against rich red background. Flesh contours red. Hard. 7″ × 1¼″. Width of painted surface ⅜″.

Kha. i. C. 0015, Kha. ix. 0019, Kha. i. E. 0035. Fr. of painted panel in several pieces, now joined. Shows portion of original upper edge, the other three sides broken away. Fr. appears to be approximately centre of upper part of a panel. *Obv.* Head, neck, and breast of animal-headed deity (? rat). Head inclined to R. p. Jaws slightly open, showing rat-like teeth. Portion of eye. Head-dress consists of a large egg-like object, lying in a surrounding border or 'nest' of recurved lotus petals and marked with a few black lines, the 'egg' and all the objects composing the head-dress being white. Stuck into the egg, R. and L., are two feathers, and below these are two long bud-shaped objects, outlined and marked with red, and somewhat resembling long clenched hands. Below these is the supporting taenia surrounding the head. Round neck usual elaborate carcanet with pendent bells. The dress (small portions visible) is pale green. Nimbus, olive. Outlines of flesh red; also the upper portion of 'egg' and the hand-like buds. Other lines black. Painting much defaced.

Rev. Fig. in tightly-fitting red garment with deep collar and cuffs and 'train' of dark grey. The red powdered with small pattern composed of four white dots. Head and shoulders ¾ to R. Hips nearly profile. Waist narrow. R. hand lightly closed, held to middle of breast; L. hand, slightly out from body and raised to chin level, holds some object outlined black but indistinguishable. Face round, eyes slightly oblique, eyebrows sloping down to centre. Hair black, with crimped lock in front of R. ear. Ears prob. have earrings. Coronet on head. Collar, cuffs, and 'train' orn. with oblique rows of white dots. The fig., which may be female, is in a sitting posture, the thighs being directed forward (to L. p.), but the knees are just out of the picture, and position of lower legs is doubtful. From below thighs, a narrow swirl of dark drapery swings backwards and downwards and this 'train' gives a mermaid-like character to fig. Nimbus deep red with white outlines. Background almost all missing, but here and there are spots of pattern similar to that on red robe, but larger. Some fragmentary marks in black behind upper R. arm may be remains of written chars. Generally better preserved than *Obv.* 7¼″ × 3⅞″ × ½″ to $\frac{9}{16}$″. Pl. XII.

Kha. i. C. 0016. Fr. of painted panel (prob. about half), showing original edges on three sides, lower edge chamfered. *Obv.* Seated deity (prob. Gaṇeśa) in scarlet *kurta*, with bell-shaped short sleeves and tight-fitting long ones. R. arm only visible, and this rests with hand in lap or on thigh. All details perished. Outline of encircling halo partly traceable. *Rev.* Faint traces of paint. Scored with knife-cuts. Soft and perished. 5⅛″ × 1⅞″ × $\frac{9}{16}$″.

Kha. i. C. 0017. Fr. of painted panel similar to Kha. i. N. of c. base. 001. Portions of two figs. Much broken, but where intact paint is well preserved. 8¼″ × 2¾″ × ¼″.

Kha. i. C. 0018. Fr. of painted panel, in bad state, similar to Kha. i. N. of c. base. 001. $6'' \times 1\frac{1}{4}'' \times \frac{1}{4}''$.

Kha. i. C. 0019. Fr. of painted panel similar to Kha. i. N. of c. base. 001. Portions of two figs. Colour well preserved. $6\frac{1}{4}'' \times 1'' \times \frac{1}{4}''$.

Kha. i. C. 0020–25. Frs. of painted wood, similar to Kha. i. N. of c. base. 001. Badly defaced. Sizes varying from $5\frac{5}{8}'' \times 1'' \times \frac{1}{4}''$ to $2\frac{1}{2}'' \times 1\frac{5}{16}'' \times \frac{1}{8}''$.

Kha. i. C. 0026. Fr. of painted wood, similar to Kha. i. N. of c. base. 001. Part of head of one fig. with upper part of vesica, and parts of a vesica on either side. Split on all sides. $8\frac{1}{2}'' \times 2'' \times \frac{1}{2}''$.

Kha. i. C. 0027. Fr. of painted panel broken on all sides. *Obv.* Towards lower end head of coroneted fig. of Persian type (cf. D. x. 4, *Anc. Khotan*, Pl. LXIII, four-armed deity). Halo, oval with pointed top, is green with white line. Above, fore-part of black horse with white markings, trotting to R. p. Thighs of rider clad in white-spotted red breeches (or *dhōtī*), tucked into black top-boots which cover the lower leg. Much defaced. *Rev.* Head and shoulders of roughly executed fig., badly defaced. Wood very soft. $4\frac{1}{4}'' \times 2\frac{1}{2}'' \times \frac{3}{8}''$.

Kha. i. C. 0028. Fr. of painted wood flaked off thicker piece. Traces of paint on one side. Prob. part of row of seated Bodhisattvas. Mark of adze at one end. Hard. $5\frac{7}{8}'' \times 2\frac{1}{2}'' \times \frac{1}{4}''$.

Kha. i. C. 0029–31. Frs. of painted wood, painted on one side. Defaced. $6\frac{3}{4}'' \times 1\frac{1}{8}'' \times \frac{3}{8}''$ to $4\frac{1}{2}'' \times 1\frac{1}{2}'' \times \frac{1}{4}''$.

Kha. i. C. 0032. Fr. of painted wood, painted on one side. Lower part of face. Flesh yellow, red contours. Halo red. Background light green. Much defaced. Soft. $3\frac{1}{2}'' \times \frac{7}{8}'' \times \frac{3}{16}''$.

Kha. i. C. 0033. Fr. of painted wood from angle, showing dark paint on two contiguous sides; on one, white petal-like dabs which may represent embroidery on a robe, of which the folds are faintly visible in white. Broken and split. $5\frac{7}{8}'' \times \frac{9}{16}'' \times \frac{1}{2}''$.

Kha. i. C. 0034. Fr. of painted wood, in two pieces (now joined), showing draperies in pink, brown, and light green. Black outlines. Roughly painted. Fairly preserved. $4\frac{7}{8}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

Kha. i. C. 0035. Fr. of painted wood, with representation of cloud scroll shaded pink and pale green. Part of one edge intact, chamfered. Other edges broken. Painting very rough. Wood hard. Roughly triangular. $8\frac{1}{2}'' \times 2\frac{1}{8}'' \times \frac{7}{16}''$.

Kha. i. C. 0036 + 0036. a. Fr. of painted wood, in two pieces. Head of fig. with brown nimbus, and above a flame-like pennon hanging down. Hair black. Coronet dull yellow, outlined black. Flesh contours black (unusual). Flesh yellow-pink. (0036) $12'' \times 2''$. (0036. a) $4'' \times \frac{7}{8}''$. Pl. XIV.

Kha. i. C. 0037. Fr. of painted wood with traces of flame-like scroll. Hard. $10\frac{1}{2}'' \times 1\frac{5}{8}''$.

Kha. i. C. 0038. Tangle of cord made of twisted withies and fabric, faded red.

***Kha. i. C. 0039. Stucco relief fr.** of Gandharvī flying L. Nude except for mantle over shoulder. Hands extended hold garland of drapery and flowers (?). Corresponds to Kha. i. E. 0028, q. v. Wings of conventional Persian type blue, garland red, body white with red markings; beyond wing, fr. of cloud (?) pink. Head, R. arm and breast, and legs below knees missing. Hard white stucco. $4\frac{3}{4}'' \times 4''$.
From same mould: Kha. i. E. 006, 0038, 0039; ii. 0019.

Kha. i. C. 0040. Stucco relief fr. Head of Buddha. Features much worn. Part of halo only preserved to R. This green with red border. Hair black, top of robe red. White stucco. $2\frac{1}{4}'' \times 2\frac{1}{2}''$.

Kha. i. C. 0041. Stucco relief, head of Gandharvī, like Kha. ii. N.W. 005. Traces of red on halo. Hair black. White stucco. $1\frac{5}{8}'' \times 1\frac{7}{8}''$.

Kha. i. C. 0046. Stucco relief fr., first and second fingers of R. hand from colossal fig. Gilding over red, on white slip. Traces only of each. Cf. Kha. i. 0029. White stucco. Gr. length $3''$. Width of finger at nail $\frac{7}{8}''$.

Kha. i. C. 0051, 0052. Stucco relief frs., gilded. 0051 shows also lines in red. Both show canvas lining, and 0052 shows traces of coarse clay stucco within. White stucco. $2'' \times 1\frac{3}{8}''$. $2\frac{1}{4}'' \times 1\frac{3}{4}''$.

Kha. i. C. 0053. Stucco relief fr. Flame; three-ribbed flattened S-curve. Traces of red. $2\frac{3}{4}'' \times \frac{7}{8}''$.

Kha. i. C. 0054. Fresco fr., in several pieces, of large composition. Upper half of Bodhisattva, narrow waist, long ears, diadem with Dhyāni-Buddha plaque in front. Hair black and long in knob visible at side of plaque, white taenia with long end pendent down R. shoulder and arm. R. hand upraised to breast, palm out. Fingers webbed (?). Two massive necklets (yellow). Longer rope-like necklet (green) with pearl and gold (yellow) ornament. Bangles at wrist, large circular armlets. Body nude as far as it exists in fragment, yellow stole round upper R. arm. Face very round. Mouth and nose small. Eyes long and dreamy. Tilaka. Pear-shaped nimbus dark green bordered with pink shaded outwards to white. L. side of head, L. shoulder, and nearly all L. arm broken away. Vesica green bordered with two bands of red-brown, the outer the darker, edged with thin white lines. Green and inner border divided by white dots. Two red-brown bands extend vertically above on L., and beyond is blue band on which are placed oval vesica panels, containing seated Buddha figs. in red-brown robes, red-brown haloes, and light green vesicas with yellow borders surrounded by white dots, outside which is border of red petals. In spandrels between these vesicas, two leaves curling, respectively, up and down. Contours red. Black for hair, etc. Colouring rich. The use of white very effective. $17\frac{1}{2}'' \times 15''$. Pl. XII.

Kha. i. C. 0055. a–c. Three fresco frs. showing parts of loose floral design outlined in black with red, yellow, and pale

green washes on white ground. (*a*) shows part of a red background. Rough work. 5¼″ × 6½″; 4¼″ × 6½″; 4¼″ × 5½″.

Kha. i. C. 0056. a, b. Fresco fr., showing rows of seated Buddha figs. on straight Padmāsanas. Robes are red, white, and grey, and their order, both horizontally and vertically, is red between white and grey. Colour of vesica and nimbus always counterchanged to contrast with robe. Pale blue used also for backgrounds. 1′ 3″ × 11½″.

Kha. i. C. 0056. c. Fr. of painted panel, broken at top, L. side, and lower part of R. side. Portion of bark remains on orig. edge to R. Shows seated Buddha in green robe and red upper garment, hands resting together in lap; on Padmāsana of green petals with pink centres, brown outer ray (sepals) and yellow seed vessel. Upper part of fig. much abraded and almost indistinguishable. Below Padmāsana, on buff ground, a relatively large L. human eye and inner angle of its fellow (broken away). Connexion of this feature with upper subject not clear. All paint below eye absent. Work good. 14¾″ × 3¼″.

Kha. i. C. 0057. a, b. Two frs. of painted wooden panels. On (*a*) traces of drapery, red and white; on (*b*) very small head, red outline on yellow; hair and eyes black, with vesica (?) of yellow with red lines. (*a*) 7″ × 1¾″; (*b*) 4″ × ¾″.

Kha. i. C. 0057. c. Fresco fr., similar to Kha. i. C. 0056. a, b and prob. part of it. 8″ × 7½″.

Kha. i. C. 0058. Fresco fr. Part of seated Buddha, looking ¾ L. Cf. Kha. i. C. 0056. a, b. Flesh white. 3¾″ × 3¾″.

Kha. i. C. 0059. Fresco fr. Part of seated Buddha, looking ¾ L. Cf. Kha. i. C. 0056. a, b. Flesh white. 3¼″ × 3½″.

Kha. i. C. 0060. Fresco fr., showing rows of seated Buddha figs. similar to Kha. i. C. 0056. a, b, but less carefully painted. 12½″ × 9½″.

Kha. i. C. 0061. Fresco fr., showing diaper of seated Buddha figs. arranged in horizontal and vertical rows. Each rectangular space allotted to a fig. is outlined dark red and white. Colours of backgrounds are red between blue and green. Figs. robed in blue and red, blue with red background, red with blue and green. Nimbus always pink. Curved Padmāsana pink with red robe, green with blue. Vesica white, grey-bordered, with blue robe; green, red-bordered, or blue, brown-bordered, with red robe. Flesh, discoloured pink. Fingers webbed. Good work. 10″ × 14″.

Kha. i. C. 0062. Fresco fr. of seated Buddha fig. diaper from wall. Similar to Kha. i. C. 0061, but less carefully painted. 10″ × 7¾″.

Kha. i. C. 0063. Fresco fr. Seated Buddha fig. diaper. Similar to Kha. i. C. 0061. 10″ × 10″.

Kha. i. C. 0064. Fresco fr. Parts of five rows of seated Buddha fig. diaper, looking ¾ L. Flesh white. Work rather poor. 1′ 8″ × 11″.

Kha. i. C. 0065. Fresco fr., seated Buddha fig. diaper. Similar to Kha. i. C. 0064. 6¼″ × 6″.

Kha. i. C. 0066–0073. Fresco frs., showing diaper of seated Buddha figs. 0071 shows prolongation of outer angles of eyes, a style much used in thirteenth-cent. Persian pottery. Largest fr. (0066) 6″ × 5″.

Kha. i. C. 0074. Eight frs. of a wall painting. Two bands of ornament are seen, above which on one fr. is lower part of large lotus throne. Upper band has series of trumpet-shaped blossoms red and green alternately facing upwards and downwards, on a maroon ground, this bounded above and below by broad white line, on part of which runs Brāhmī inscription. Lower band imitates drapery in series of hanging vandykes, red overlapping grey, which show between. Circles of white dots and three maroon hearts on the red; the dots only on grey. Maroon ground with hanging pieces of white streamers. Painted over both bands is standing fig. facing L. Brown robe leaving R. shoulder bare. Flesh red. L. hand holds flower; R. hand censer. Traces of band decoration seen where paint of fig. is worn.

In lower band showing where paint of hanging drapery has worn off is squatting a grey fig. with ass's head, black shoes (hoofs), loin-cloth and stole. In L. hand he appears to hold some indistinguishable object. Other traces of earlier painting appear on the same fr. Early painting good. Later, rather coarse, and some of the paint badly mixed. For inscr. see Appendix F. 4′ 4¾″ × 1′ 1¾″.

Kha. i. C. 0075. Fresco fr. R. shoulder of seated Buddha, and part of vesica. Robe maroon outlined black. Vesica orange, yellow, and green. 7¼″ × 3½″.

Kha. i. C. 0076. Fresco fr. To R. seated Buddha. Brown robe, green vesica, yellow nimbus. Maroon and brown background, divided horizontally by white lines. To L., part of arm or leg of large fig., the upper part covered with greenish-white transparent drapery. 4½″ × 5½″.

Kha. i. C. 0077. Fresco fr. Above, lower part of Buddha seated on lotus with feet crossed. Brown robe. R. shoulder bare. Vesica brown, pink, and green. Below, one line of Brāhmī chars. Below, Buddha seated (upper part) looking ¾ L. Green, red, and black vesica. Red robe. For inscr. see Appendix F. 14″ × 8″.

Kha. i. C. 0078. Fresco fr., showing portion of grey-petalled Padmāsana with dull pink centre. Apparently seated on it cross-legged a fig., of which R. thigh and upper part of lower leg only remain. Flesh of these is undraped, pale pink decorated with patterns applied directly on to the skin. On lower leg, a tree-like meander with branches each bearing a round berry (?). On thigh, three concentric circles. All patterns dull yellow, outlined red. Abraded. 7″ × 4″.

Kha. i. C. 0079. Fresco fr. Part of two seated Buddhas forming portion of Buddha diaper. 4½″ × 6″.

Kha. i. C. 0080. Fresco fr. Part of lotus throne (white and grey) with R. foot of standing fig. nearly life-size. Red ground. In field, small grey lotus with white dots. $7\frac{1}{2}'' \times 6''$.

Kha. i. C. 0081. Fresco fr. Uncertain subject. White tendrils on a black ground. Below, a red border. On the black ground part of a *sitāra* in white, with strings, sound holes, and bridge in red. $3\frac{1}{2}'' \times 2\frac{1}{4}''$.

Kha. i. C. 0082. Fresco fr. On background of green and maroon, part of standing Buddha looking $\frac{3}{4}$ L. R. hand upraised. Dark red robe, yellow flesh. Grey and pink vesica. Black and red nimbus, pointed. $7'' \times 5''$.

Kha. i. C. 0083. Fresco fr. Design uncertain. Blue and green floral design on red ground within square borders, black or brown. These separated by terra-cotta ground colour. Very bad condition. $5\frac{1}{2}'' \times 3''$.

Kha. i. C. 0084. Fresco fr. Above, red band; below, on olive-green ground, red lotus with black centre. $3\frac{1}{2}'' \times 2\frac{1}{2}''$.

Kha. i. C. 0085. Fresco fr. Above, a piece of red field with a curved blue border below it. Below, on white field a buff crown (?) outlined in red, with green and red jewels. A red streamer from L. corner, and green streamer from R. corner. $4'' \times 3\frac{1}{2}''$.

Kha. i. C. 0086. a, b. Two fresco frs. Part of blue and white edge to a vesica (?), on red and green ground. Inside edge, green and white floral design on white. $2\frac{3}{4}'' \times 2\frac{1}{2}''$.

Kha. i. C. 0087. Fresco fr. Part of green lotus on red ground. $2'' \times 2\frac{1}{4}''$.

Kha. i. C. 0088. Fresco fr. Part of multi-coloured floral design. $2\frac{1}{2}'' \times 2''$.

Kha. i. C. 0089. Fresco fr. Uncertain ornamental design. Bad condition. Apparently a jewel, in form of equal-armed cross composed of five squares. Two arms blue and two green. Centre square, pink. External angles filled by pink triangles making the general contour octagonal. At end of one arm a row of lotus petals. From this proceed three diverging lines. Background brown. $3\frac{1}{4}'' \times 2\frac{3}{8}''$.

Kha. i. C. 0090. Fresco fr. Uncertain ornamental design. Prob. represents a brocade with pattern in circles bordered with bands of white spots, and having a quadrangular pattern between the circles. Ground, maroon. Bad condition. $3'' \times 1\frac{3}{4}''$.

Kha. i. C. 0091. Fresco fr. On buff ground, series of converging red lines; space between them crossed by alternate groups of three or four red and blue lines; having general effect of red and blue squares arranged in chequer pattern. Prob. represents textile. $3'' \times 2\frac{1}{2}''$.

Kha. i. C. 0092. Fresco fr., showing portion of imbricated leaf pattern. Leaves pink and green, outlined black and white. Much abraded. $1\frac{7}{8}'' \times 1\frac{1}{8}''$.

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Kha. i. C. 0093. Fresco fr. Uncertain ornamental design. $1\frac{1}{2}'' \times 1\frac{1}{4}''$.

Kha. i. C. 0094. a–d. Four fresco frs. Apparently part of replica of Kha. i. C. 0097. Fabric and colours are exactly similar. Rows of seated figs. of Buddha to L. p.; one standing fig. holding flask to R. p., the Fakīr, and part of demon all appear. Very bad condition. $9'' \times 7''$; $4'' \times 5''$. $2\frac{1}{2}'' \times 2\frac{3}{4}''$; $5'' \times 3''$.

Kha. i. C. 0095. Fresco fr. On a brown-bordered, pale green, vesica, a badly conceived and badly drawn fig. of Gaṇeśa. He is thin and has badly formed ears and clumsily conventionalized face. A rope of pearls hangs round his neck. In the three visible hands are a basket of pearls (?), a radish, an *ankus*. He wears a red-brown *dhōtī* and a grey stole. Flesh yellowish-grey. Outlines black and brown. Condition fair. $6\frac{1}{2}'' \times 6''$. Pl. XI.

Kha. i. C. 0096. Fresco fr., in faded washes of colour. A Buddha fig. seated on Padmāsana with hands in lap; has a curious appearance because a few black outlines remain strong and all other details have perished. Below and to R. p. are fragments of Brāhmī inscription in black. See Appendix F. $5\frac{1}{4}'' \times 3\frac{1}{4}''$. Pl. XI.

Kha. i. C. 0097. Fresco fr. in several pieces (now joined) of large composition. In centre Buddha seated on Padmāsana, white with buff centre; has hands in Nyāya-mudrā. He is shaven, has long ears, and something which appears to be Uṣṇīṣa, but is flesh colour (? shaven). His robe is red lined white, and falls from L. shoulder across to R. hip, covering also the legs. Feet, exposed, rest, with soles up, on thighs. Cream-coloured stole hangs over L. shoulder. Nimbus. Behind and projecting all round, leaf-like forms with red veining suggesting flames.

Two standing Bodhisattvas, one on each side, are dressed practically alike and both carry in L. hand the long-necked flask. Their lower garments are pale buff, held by buff *kamarband* with pendent ends. A stole of scanty dimensions, white with quatrefoil spot pattern in black, crosses body obliquely from L. shoulder, crossing on breast. A larger stole crosses shoulders and arms, and has long floating and pendent ends. Necklet, armlets, and bangles are worn. Hair black, long and rippling, and in case of R. p. fig. dressed in large knob bound by fillets and adorned in front by lozenge-shaped jewel with leaf-like projections R. and L. and up. Top of head of L. p. fig. broken away. Face of this effeminate. Positions of hands slightly different. Both nimbate.

In front of Buddha, a sulphur-yellow lunette bordered by row of conventional stunted trees. At R. p. extremity is seated boar-headed divinity facing L., white with grey head and short red *dhōtī*, holding in front of him, by arms and legs, a human fig. (yellow) of which he is devouring the entrails which stream from his jaws. To L. p. sits old white-bearded fig. coloured grey, white hair tied in knob and adorned with diadem (yellow). Fierce eyes. Red short *dhōtī*. Leopard skin on front of body (?). Hands resting in lap.

In centre of lunette a six-branched lamp with green flames rising from each *chirāgh*. Small Buddha figs. seated in rows fill the remaining space. General background rich red. Outlines red and black. The work is rather rough but skilful. Colour generally weak, excepting the red. Condition: broken and abraded. Very friable. 2′ 5″ × 1′ 10½″. Pl. XI.

Kha. i. C. 0098. Fresco fr. Part of border with floral design. 3½″ × 1¼″.

Kha. i. C. 0099. Fresco fr. On light red ground, white and pale green floral scroll design outlined in black. On one side, part of vesica edge (?) with green leaves on white. 6″ × 5½″.

Kha. i. C. 00100. Fresco fr., showing head and shoulders of Buddha fig., head ¾ to R. p. Flesh dark (prob. discoloured); hair, etc., black; nimbus blue; halo pale green; robe saffron. Broken and abraded. 2¾″ × 2¾″.

Kha. i. C. 000101. Fresco fr., painted very rich crimson, with black lines. Prob. drapery. 1¾″ × 1⅛″.

Kha. i. C. 00102. Fresco fr. of border. Two seated Buddha figs. ¾ to R. p., hands in lap on which black bowl; straight Padmāsana. Red robes, pink background. Pale green nimbus with white vesica; white nimbus with pale green vesica. Black hair brought to downward point over forehead, Uṣṇīṣa showing above narrow Chinese cap-shaped head-dress. Necklet black with white spots. Rapid work. 9″ × 4″.

Kha. i. C. 00103. Fresco fr., showing portion of R. upper arm of nearly life-size fig., wearing armlet (yellow) of same pattern as in Kha. 0031 (see Pl. XII). Flesh pink shaded. Dark green stole winds round arms. Folds of white drapery on dark red ground (figured with white pattern) to R. p. Indication of body of fig. to L. p. Small portion of armlet of similar pattern appears to R. p. 4¼″ × 4¾″.

Kha i. C. 00104. Fresco fr., showing head of Buddha fig. ¾ to R. p. Long ears. Flesh very pale pink. Robe red-brown. Background dark grey. Hair, etc., black. Flesh contours red. Rapid execution. 4½″ × 2½″.

Kha. i. C. 00105. Fresco fr., showing floral scroll detail in green with white and black outlines. Pink ground. Blue to L. p. Prob. part of Kha. 0039. Condition: broken and abraded. 1¾″ × 1″.

Kha. i. C. 00106. Fresco fr., in two pieces, showing conventional floral scroll consisting of main stem, green and pink, out of which grows large flower composed of green and grey petals outlined white and black, veined black; seed vessel brown with white spots; sepals white. Background pink. To R. p. red border band. Rough but well designed and free in treatment. 4¾″ × 2¾″.

Kha. i. C. 00107. Fresco fr., showing detail of conventional floral ornament. Complete pattern prob. of circular form, of which part of outer border only visible. Chief element of this is a lily-like bud, springing from between two curled blue sepals four pairs of which form inner border of circle. Sepals spring from green leaf and open suddenly. Bud enclosed between two elongated green leaves which spring from centre of upper edge of sepal, and meet at points forming an ogee shape. Outer curled tips of sepals meet those of adjoining pairs and support bud and leaves similar to first, the bases of leaves meeting those of leaves on each side, thus forming a connected series of ogee curves as outer line of pattern. In spandrels between ogees are inserted small trefoil petals, black with yellow centre, white and black outlines. Spaces between circular pattern seem to have been furnished with green and black quatrefoils. Ground brick-red. Outlines of ornament white and black. To one side, band of a dark brown colour with black lines (drapery?). 3″ × 1½″.

Kha. i. C. 00108. a, b. Two fresco frs. Portion of pink background with four-petalled flowers in dark red, semé. (*a*) has a blue patch at one side. Faded. (*a*) 4¼″ × 3¾″; (*b*) 3¼″ × 2½″.

Kha. i. C. 00109. Fresco fr., trellis-pattern floor in red lines on white ground on which rest forefeet of horse (pink). Behind the legs and at upper end of trellis, a dice-patterned cushion. Abraded. 4½″ × 2¼″.

Kha. i. C. 00110. Fresco fr., showing white and blue drapery on rich crimson ground. Abraded. 3¾″ × 2½″.

Kha. i. C. 00111. Fresco fr. of ornamental detail, prob. armlet of large fig. To L. of ornament a white band (stole?) then a black band, and to L. of this bright turquoise. Ornament outlined red in semicircular bands round blue semicircular centre. Bands contain outlined seeds and bear traces of gilding. In three of the seeds the surface is raised and partly detached, probably due to use of some kind of gold size or heavy gum as the vehicle for gilding. In the blue centre where are traces of gold same condition exists. Cracked in places. 2¾″ × 1¾″.

Kha. i. C. 00112. Fresco fr., showing dark green-grey drapery, prob. part of L. leg of seated fig. White Padmāsana. Dark red-brown background. White halo. Rough work. 3⅜″ × 2¾″.

Kha. i. C. 00113. Fresco fr., showing portion of red-brown Padmāsana. Pale pink background. Outlines black and coarse. 2″ × 1½″.

Kha. i. C. 00114. Fresco fr.; roughly painted ornamental detail. Pink ground with dark brown bands and white spots in lines and circles. 2½″ × 1½″.

Kha. i. C. 00115. Fresco fr., showing part of head of Buddha fig. ¾ to R. p. Eyes heavy and dreamy. Flesh pink. Contours red. Hair, eyebrows, etc., black. Tilaka. Nimbus green to white. Rapid work. 3⅜″ × 3½″.

Kha. i. C. 00116. Fresco fr., showing portion of R. eye, face, and head of Buddha fig. Flesh dark pink. Hair with Uṣṇīṣa, black. Nimbus dark red, bordered with broad white band, outside which a thin white line. Vesica red, bordered with white and broad band of black. Background

red with white sprig. Horizontal white line divides this from upper panel (broken away). Below white line a few Brāhmī chars. in black. See Appendix F. Work rather rough. $5\frac{1}{2}'' \times 3''$.

Kha. i. C. 00117. Fresco fr., showing lower part of fig. seated on shaded pink lotus with yellow centre. *Dhōtī* red. R. hand resting in lap has bangle and appears to grasp some unintelligible object. Fine work. Abraded. $2\frac{1}{2}'' \times 2''$.

Kha. i. C. 00118. Fresco fr. of large composition. R. hand of Buddha fig., life-size, fingers missing. Extended to R. palm out, fingers down. Web extending from thumb. Sacred mark in palm formed by three concentric circles surrounded by dots. Thumb-nail short. Bangle with turquoise jewel on wrist. Triangle and circle (yellow) seem to be painted on wrist. Flesh pink.

Behind hand and prob. part of border of vesica, standing Buddha fig. in red-brown robe, head slightly bent and $\frac{3}{4}$ to R. p. R. hand palm out at breast. Long pointed flame-shape nimbus grey and buff. Vesica pale grey-blue, background red. Fragments of colour on general background, green, red, pink (drapery), and chocolate. Abraded. $9'' \times 7\frac{1}{2}''$.

Kha. i. C. 00119. a–g. Fresco frs. of ornamental detail painted on red ground. On (*a*) a pattern of circular form composed of a central pink four-petalled rose on turquoise ground, encircled by a stem-like line looped to form eight equidistant outward projecting points. At alternate points the meeting stems continue in scrolled ends, from between which proceed four-petalled buds. The intermediate points bear each a buttercup-shape flower (green inside, blue out, red centre, black shading). Other frs. are variations of this and similar schemes. Abraded. (*a*) $7\frac{3}{4}'' \times 3\frac{3}{4}''$. Others smaller.

Kha. i. C. 00120. Fresco fr., showing borders of vesica, brown, red, green centre. Part of nimbus, pink. Background red. Small portion of detail within vesica, indeterminate. $5\frac{1}{2}'' \times 2\frac{1}{2}''$.

Kha. i. C. 00121. Fresco fr. on red ground showing R. p. portions of panels containing three seated Buddha figs., with green, white, or red nimbus. Padmāsana straight. To R. p. on background, boldly painted curled lily pattern, rather disjointed. $7\frac{1}{2}'' \times 4''$.

Kha. i. C. 00122. Fresco fr. showing portions of two fishes on green (water) background. The red dolphin-like head of one points to R. p. The green, white, and blue scaled back, and portions of red fins, of a larger fish appear at lower edge. A mass of bright red shows at upper edge. Work rough. Abraded. $2\frac{3}{4}'' \times 2\frac{3}{4}''$.

Kha. i. C. 00123. Stucco fr. coated on a flat tail of cotton (?) fabric, folded round a core of coarse fibre. The stucco of hard plaster shows traces of red paint with gilding over. It probably formed part of elongated pierced ear-lobe of a large fig. Much broken. $7'' \times 1'' \times \frac{1}{2}''$.

Kha. i. C. 00124. Fresco fr., showing R. ear and side of head of Buddha fig. to L. p. Long ear. Long hair, black. Mukuṭa yellow with half anthemion ornament in red outline. Knotted taenia, white. Nimbus pink. Flesh pink. Rapid work. Condition good. $4'' \times 2''$.

Kha. i. C. 00125. Stucco relief fr., painted with crossed red lines upon gold ground. White stucco. $1\frac{3}{8}'' \times 1\frac{1}{8}''$.

Kha. i. C. 00126. Terra-cotta fr., decorated with plaited braid coiled in spiral, starting from central knob. Surface slightly convex. Appliqué ornament to vase. $3'' \times 2'' \times \frac{1}{20}''$ to $\frac{1}{10}''$.

Kha. i. E. 002 a, b. Stucco relief. Two frs. of 'bead and lotus-petal' moulding; cf. Kha. vii. 005. (*a*) shows reddish-yellow colour. Cf. Kha. ix. 0010. White stucco. Length (together) $4\frac{1}{2}'' \times 1\frac{1}{2}''$.

***Kha. i. E. 003 (joined with Kha. ii. 008). Stucco relief fr.** of 'bead and lotus-petal' border, made from mould of which Kha. ii. 0074 is part. Straight edging of beads from which lotus petals with boldly marked lobes and light central rib curve away like foliage; pointed leaves visible between petals. Petals originally pink. $5'' \times 3\frac{1}{4}''$.

From same mould: Kha. ii. 008, 009, 0012, 0052, 0053, 0054, 0055, 0056, 0057, 0058; ii. C. 004. All of white stucco. Cf. (smaller scale) Kha. i. S.W. 005. Also cf. Kha. vii. 001.

Kha. i. E. 008. Stucco relief fr. of two overlapping bands of flame pattern from vesica; inner painted red; outer covered with white slip. Cf. Kha. i. C. 0011. White stucco. $3'' \times 2\frac{5}{8}''$.

Kha. i. E. 009. Stucco relief fr. Head of Gandharvī in high relief, much of face destroyed. Hair black; two bands of vermilion round throat. White stucco. $1\frac{15}{16}'' \times 1\frac{3}{4}''$.

Kha. i. E. 0011. Stucco relief fr. of 'bead and lotus-petal' border. Cf. Kha. i. E. 003 (similar but different mould). $2\frac{1}{8}'' \times 2\frac{7}{8}''$.

Kha. i. E. 0014. Stucco relief fr. Lotus pedestal with feet and ankles of Buddha. White stucco. Cf. Kha. i. 001 (slightly different mould). $2'' \times 1\frac{5}{8}''$.

Kha. i. E. 0017. Stucco relief fr. Upper part (head to breast) of a Buddha in attitude of protection. Hair modelled and painted black; drapery dark red. Flesh and nimbus orig. gilded. On L. side of fr. is slight trace of blue background. Fig. similar to Kha. i. W. 0012. White stucco. $3\frac{1}{2}'' \times 3\frac{1}{4}''$.

Kha. i. E. 0018. Stucco relief fr. Flame work in high relief. Back shows impress of scored plaster to which this was applied. White stucco. $4'' \times 3\frac{1}{2}''$.

Kha. i. E. 0019. Stucco relief fr. L. foot of small human fig. Nails, divisions between toes, etc., outlined in reddish-brown; ivory-coloured slip. White stucco. $2'' \times 1\frac{1}{2}''$.

***Kha. i. E. 0020. Stucco relief fr.** of lotus wreath; sections are separated by double sharp-edged ring instead of usual fashion. Cf. Kha. vii. 001. White stucco, much worn. $3'' \times 1\frac{3}{16}''$. From same mould: Kha. i. C. 0043.

***Kha. i. E. 0028. Stucco relief fr.** Gandharvī flying to R., nude save for mantle over shoulders; upper arms directed downwards, forearms raised holding wreath across lower part of body. On R. is portion of curved wing of conventional 'Oriental' type. Head, hands, both feet with ankles, and background lost. Traces of red on wing, green on drapery or wreath. Hard white stucco. $5\frac{3}{4}'' \times 4''$. From same mould: Kha. i. C. 004; ii. W. 001. Cf. *Anc. Khotan*, Pl. LVI, D. xii. 1.

Kha. i. E. 0031. Fr. of painted wood split off thicker piece. All edges broken. Remains of painting seem to show a seated fig., with ornamental head-dress and long black hair, all outlines in black. Fig. yellow, and background of vesica brown. Faint traces of red and green below. Wood hard. $9\frac{1}{2}'' \times 1\frac{5}{8}''$.

Kha. i. E. 0032. Fr. of painted wood, painted on one side. Lower part, a blue lotus, on a light red ground, remains of a band of blue below. Above to R. p., a long patch of deep red outlined white, which may be part of a garment. Wood well preserved. $6'' \times 1\frac{3}{4}'' \times \frac{3}{8}''$.

Kha. i. E. 0033. Painted panel of wood, top edge broken away. In elliptical vesica with white ground, a fig. seated cross-legged wearing a pink tight-sleeved coat with blue-grey trimming round skirt, cuffs, and collar (prob. fur). Below coat, detail obscured, but general colour a dark reddish-brown. There are four arms. L. lower has hand resting lightly with knuckles on hip. R. lower has hand raised to breast holding some indistinguishable object. The two other arms are forearms only, coinciding with the others at elbows, and are upraised, the hands missing. Head defaced and mostly missing. Background pink. Personage prob. same as in *Anc. Khotan*, Pl. LXI. Much damaged. $4\frac{1}{2}'' \times 3\frac{1}{8}'' \times \frac{9}{16}''$.

Kha. i. E. 0034. Painted panel. L. p. fr. of panel, containing 'subject of horseman' (*Anc. Khotan*, Pl. LIX). It seems to be a rough sketch in black only on the white ground with which the panel was covered. The parts visible on this fr. are: at top, the flying bird; part of nimbus and L. shoulder of horseman; upper edge of back of saddle and an object which is possibly a quiver; hind quarters and near hind-leg of horse (well drawn), and portion of trappings. From horseman are the flowing lines always so cleverly introduced to express motion. L. p. edge rounded and chamfered at back. Lower edge chamfered. A hole is drilled through $\frac{3}{4}''$ from side and $1\frac{3}{4}''$ from top, doubtless for a fixing-peg. Painting much defaced, wood well preserved. $9'' \times 1\frac{3}{4}'' \times \frac{3}{16}''$ to $\frac{3}{8}''$.

Kha. i. E. 0036. Fr. of painted panel. Traces of paint on both sides. Surface abraded. Wood soft. $6\frac{7}{8}'' \times 1\frac{1}{2}'' \times \frac{3}{8}''$.

Kha. i. E. 0039; ii. 0019 (joined). Stucco relief fr. of Gandharvī flying L. From same mould as Kha. i. C. 0039. R. arm broken at wrist, and L. at elbow. Legs broken above ankles. Traces of pink on wings, and of blue on nimbus. White stucco. $6\frac{1}{2}'' \times 5''$. Pl. XV.

Kha. i. E. 0040. Stucco relief fr., prob. of drapery of large fig. Red ground with gold stars as on Mi. xiii. 004. One complete and traces of four others. Outer surface, $\frac{1}{10}''$ thick, is plaster of Paris. This is applied to material on which frescoes are painted, i. e. clay mixed with straw. $5\frac{1}{4}'' \times 3\frac{1}{2}''$.

Kha. i. E. 0042. Stucco relief fr. with curved grooves. Prob. edge of drapery. Striped with red, green, brown, and white parallel with curves. Red clay, white slip. $3'' \times 1\frac{3}{4}''$.

Kha. i. E. 0043. Wood carving in relief. Prob. part of chair back. On base, sloping edge of which is cut into five steps, stands a mountain goat, cut in silhouette, facing R. His outline is cut clear away, but between neck and horn the background is preserved on lower plane. The break occurs behind forefeet. From below base projects tenon. Oval of eye is incised, but no other marks, and edges are rectangular. $1'\ 11\frac{3}{4}'' \times 6'' \times 1\frac{1}{2}''$. Pl. XVII.

Kha. i. E. 0044. Part of carved wooden frieze. Above, plain rectangular moulding. Then convex moulding, carved with relief lozenge pattern. Then double row of Vandykes. Traces of paint: on upper moulding, red; on lower moulding, blue; on Vandykes, white on red or blue; on background to Vandykes, red-brown. $1'\ 7'' \times 7\frac{1}{2}'' \times 2\frac{1}{2}''$. Pl. XVII.

Kha. i. E. 0045. Fr. of chip-carving in wood; band of overlapping double leaf pattern formed by series of inverted V-shaped cuts. Length $6\frac{1}{2}'' \times 1\frac{3}{4}''$.

Kha. i. E. 0046. Fresco fr. of scroll-work detail outlined in black, with pale washes of grey, green, and brown on ornament and background. Lines of white or lighter colour than the washes are painted as high-lights on edges of scrolls. There are forms in this, and in foliate capital of Kha. i. E. 0047, frequently met with in fourteenth- and fifteenth-century Gothic stained glass. $6\frac{1}{2}'' \times 5\frac{1}{2}''$. Pl. XI.

Kha. i. E. 0047. Fresco fr. of large composition, curved at L. p. edge; in several pieces. A vertical band (yellow) divides a series of small upright panels, forming a border, from larger panels. To the R. p. is portion of petalled border (yellow, shaded with red-brown) of a vesica. Within this, on a shaded white ground, appears an elaborate flask with ovoid body, spreading foot, narrow neck curving inward from shoulders and outward again to wide mouth covered by a lid of inverted funnel shape. Flask is ornamented in black outline, with a central horizontal band of rings, with, above and below, radiating petal ornament. It rests upon the seed vessel of a pink lotus, is yellow, and carries to L. p. a bearded human mask in relief, with tongue thrust out. In the lower part of vesica are visible the L.

upper arm, knee, and thigh of a seated fig., with richly ornamented armlet and a jewelled rope. *Dhōtī* yellow. Padmāsana pink.

Between vesica and vertical band is represented an architectural shaft, with band ornaments at intervals and an elaborate capital filling spandrel above. Ornamental details interesting. The bands of ornament are reproductions of metal ferrules or housings used in wooden buildings of the Chinese (cf. terrace buildings in large painted silk banners from Ch.). The capital is a clumsy modification of beautiful Byzantine and Indian examples expressive of a vase of flowers and leaves. Above vesica, a group of three horizontal bands forms a border which is broken by some scroll ornament perhaps proceeding from top of vesica. Above the bands, leaves and berries are freely painted in grey-greens and white on black ground, the whole growth taking a circular form, leaving a spandrel in lower corner suitably filled by blossoms.

The narrow panels to L. p. of dividing band contain standing Buddha figs. on lotuses. The upper one has a vesica decorated with flames in green and grey outlined alternately with black and red and arranged *en échelon*. The fig. has black hair with the Uṣṇīṣa, long ears, Tilaka, and mark in palm of hand; under-robe, dark brown; upper, white and transparent. Both hands are upraised.

The lower fig. has black hair, bound with a garland and with pendent streamer. The peculiar robe is loose and straight from the R. armpit. About knee level it has a band of ornament composed of rosettes. Below this a double flounce, the upper green and lower pink. This arrangement is only at the back. In front is white robe from L. shoulder which spreads out and ends in a straight edge at ankles, but appears to have shaped edging piece, appliqué. The vesica is rich brown decorated with petals, buds, etc. Nimbus green with one horn of white crescent below. The fig. stands on a pink and green lotus. The garland of fruit on head, the petal and sepal character of flounces, the decorative band of rosettes, and the vesica of leaves suggest some deity representing fertility, or the earth. (Cf. fig. prob. of similar significance in painted banner Ch. 0018, to L. p.)

Below, top of head with rope-like diadem, floating white streamers, long ears, green halo, vesica decorated with overlapping triangular sepals (green) and petals (pink). Execution rough. Condition: fairly good; much defaced on L. p. 30″ × 12½″. Pl. XI.

Kha. i. E. 0048. Fresco fr., showing parts of three figs. painted on white or cream ground. In the centre an emaciated grey-haired and bearded fig. wearing a scanty green loin-cloth advances with bent back and knees to L. p., holding in R. hand a cord the other end of which is attached, in some way not visible, to a second, nimbate, fig. to R. p. wearing brown stole and jewelled necklet. The knee and portion of R. leg and Āsana of third fig. only visible. This fig. seems to be seated. Centre fig. is cleverly drawn and exhibits extraordinarily accurate observation. The external forms in regions of R. scapula and ilia are especially good. The face seems to be deliberately simian, with flattened nose, prominent jaws, strongly marked cleft in upper lip, and high prominent cheek bones. Other two figs. are probably of same type. Flesh in all dirty pink with red outlines. Execution rapid and precise. 4¼″ × 4″. Pl. XI.

Kha. i. E. 0049. Fresco fr. in several pieces (now joined), showing L. hand palm outwards, fingers down and curling up to support a flat object with projecting vertical point, which may be the neck of a flask resembling that in Kha. i. E. 0047. Various bands of dull yellow represent a stole passing over R. shoulder and behind R. arm, part of which appears on fr. By position of L. hand in relation to body, the fig. would be about ¾ to R. Rev. of stole dull grey-green. Flesh pale pink. All outlines red. Work rough. 5¾″ × 5″. Pl. XI (upside down).

Kha. i. E. 0050. Fresco fr., in several pieces, of large composition. In centre, a nearly life-size fig. of Buddha, wearing rich red robe lined pale green, with four-petalled shaded pink lotus pattern to be seen at turnover crossing breast. Over shoulders a buff mantle, of which a fold is grasped in upturned L. hand, raised to breast level. Ears elongated and pierced with long slit. Mouth small and full-lipped. Neck in folds delicately drawn. Flesh contours red. A curious convention in drawing the features is very marked (visible also in Kha. i. 0059). Line of nose is continued to form one side of cleft in upper lip and sweeps round, forming a second and redundant line of foreshortened side of upper lip. On breast (or, perhaps, an emanation from hand) a faintly sketched symmetrical ornament terminating upwards in vapoury indecision. Slight shading in red-brown on neck, at corners of mouth, ear, wing of nose, and hand. Lips red-brown, outlined with grey. Halo yellow with border bands of dark grey and red, white edged.

Vesica, same colours, but field decorated with shaded pink wedge-shape rays, radiating from fig. A broad outer band round vesica is white, with pointed elliptical panels, bordered by bands which interlace end with end, in 'true lovers' knots; the spandrel intervals filled with pink buds. In each panel, on green ground, is seated Buddha fig. in red robe on red lotus and with red flame-shaped halo. Red-grey borders outside this broad band. On ground outside, a broad horizontal band of imbricated peacocks' feathers in four rows, coloured, respectively (downwards), dark green, dark red, light green, shaded red. 'Eyes' black with white outline. Feathering black. Below, a plain buff band, under which a red band with green floral ornament outlined black. All work rapidly executed. Upper and lower parts missing. 1′ 10″ × 2′ 4″. Pl. XII.

Kha. i. E. 0051. Fresco fr., of decorative detail. Part of elaborate foliate wreath or canopy. Leaves are roughly trilobate and pointed, pink, sometimes shaded, outlined white; broad black mid-rib, heavy black outline, the outer edge of which is not trilobate. Behind each leaf a petal-shaped background of green or blue outlined with white and

black. Leaves are arranged in imbricated rows, their petal-shaped backgrounds meeting side by side, each row being alternately green and blue. To one side of this scheme is a piece of 'quilted and buttoned' ornament, bounded on one side by red band edged with yellow. Quilting lines, red one way, green the other. Buttons, red; intervals, white. Background, blue. 8" × 6½". Pl. XII.

Kha. i. E. 0052. Fresco fr. of L. p. vesica border, composed of seated Buddhas in haloes, formed by bands interlaced in 'true lovers' knots. Prob. portion of Kha. i. E. 0050. 10½" × 9".

Kha. i. E. 0053. Fresco fr., very roughly painted. Head and shoulders, *c.* half life-size, of Buddha fig., head ¾ to R. p. Whole painted in red, solid or thin, as required. The eyebrows and eyes only in black. Vesica white. Outer background dark brown. Character of work seems to suggest untrained hand. Abraded. 11" × 13".

Kha. i. E. 0054. Fresco fr., showing torso and L. arm of standing (?) Bodhisattva wearing jewelled necklet, armlet, bangle on R. wrist. Narrow scarf hangs round neck, loosely tied below breast. Parti-coloured stole encircles L. arm and floats out to L. p. R. hand raised; web between thumb and first finger. Vesica grey bordered with red and dark brown. Nimbus green, bordered pink. Work rapid but good. 7½" × 6¾".

Kha. i. E. 0055. Fresco fr., showing portions of three of a row of seated Buddha figs. on straight Padmāsanas. Colours of robes alternately red and white. Below, a row of boldly written Brāhmī characters in black. See Appendix F. Below these part of a row of large leaves, prob. part of large Padmāsana. Work all rather rough. Condition good. 9½" × 7½".

Kha. i. E. 0056. Fresco fr. of detail of large subject. Near centre two curved bands, brown and red, of vesica border. To L. p. of these, head of Buddha fig. outlined in black, with haloes also in black; all on a pale pink ground tint. Above this, and dividing it from a similar fig., a rosette and bud in black outline. These figs. seem to be part of border decoration of large vesica to R. p. Work rather rough. Abraded. 10" × 5".

Kha. i. E. 0057. Fresco fr., showing head ¾ to R. p., of Bodhisattva. Very pink; flesh contours brown; eyebrows, long hair, etc., black. Shading roughly indicated with a wash of umber at each inner angle of eyes, corners of mouth, wing of nose, below lower lip, at temple, and in bands round neck. Dark shadows at eyes give a fierce expression. Otherwise unskilful attempt to follow the dreamy model of eyes. On head a coronet of vertical petal shapes supported on a band of brown resting on hair. Halo, dark green, red bordered. Background red. Above is showing a red Padmāsana, on which stands a pink foot. 7½" × 3½".

Kha. i. E. 0058. a–e. Fresco frs. of surface covered with rows of seated Buddha figs., with colours interchanged. Colours used: red, green, buff, grey, black. General height of figs. 4¾". Work rapid. (*a*) 11¼" × 12"; (*b*) 10" × 6½"; (*c*) 9¼" × 6"; (*d*) 5¾" × 4¾"; (*e*) 4¾" × 2½".

Kha. i. E. 0059. Fresco fr., showing shaded pink lotus with yellow centre, on which are two feet close together in profile to L. p. Dark green background. 2⅝" × 1¾".

Kha. i. E. 0060. Fresco fr., showing portion of L. side and hand of standing Buddha fig. grasping fold of dark red robe. Flesh pink, shaded broadly with thin umber. The hand is shown as almost entirely in shadow, with a light falling on fleshy part about little finger and on wrist. A white leaf shaded and veined with red springs from side of fig. Vesica grey green. Border red and black. White dividing lines and on edges of robe. Work very good. 8½" × 8".

Kha. i. E. 0061. Fresco fr. of ornamental detail. Part of a panel of rhomboidal shape, bordered with red-brown lined with black and white to suggest fringe or petals. Within this a green border surrounding a white field, on which is a large red-brown lotus with grey centre encircled by white dots excepting where a cone-shaped seed-vessel protrudes. Rough dabs of dull brown in corners. Outlines black. Broken away on one side. 13" × 7½".

Kha. i. E. 0062. Fresco fr. of ornamental background similar to Kha. i. C. 00119. Much abraded. 3½" × 1¾".

Kha. i. E. 0063. a–c. Fresco frs. Ornamental background consisting of palmette-shaped flowers in grey, white, and green, and green leaves. Very broken. Abraded. (*a*) 2¼" × 2"; (*b*) 2½" × 1¾"; (*c*) 1¾" × 2".

Kha. i. E. 0064. Fresco fr. of standing fig. ¾ to L. p.; nude from waist upwards. Flesh pink, shaded with umber, in manner similar to Kha. i. E. 0057. Round arms a green-yellow stole. At neck a broad necklet, and below it a loosely tied scarf outlined in black. A garland of oval-shaped objects depends from fold of stole over R. arm. What appears to be a voluminous, white-flowered, dark maroon skirt covers legs, and is tied round waist with white band. Vesica grey-blue bordered with Indian red and black, with thin white dividing lines painted with extraordinary accuracy. Abraded. 8" × 6½".

Kha. i. E. 0065. Fresco fr. containing head of Buddha, front. Eyes downcast, rather slanting. Flesh colour very pale pink covered by thin wash of umber, leaving only as high-lights upper eyelids, nose, cheek-bones, lips, chin, portions of ears and lines round neck. Hair blue, with white taenia round Uṣṇīṣa tied in knot on each side, with hanging ends at back. Halo, oval, buff, pale umber, and grey blue. All outlines black. Execution firm and good. Abraded. 4¼" × 3".

Kha. i. E. 0066. Fresco fr. of scroll ornament, with lily-like flowers and curled bracts. Outlined black and white on a white ground. Pink and dirty green on scrolls, etc. Probably much discoloured. Work very good. Much abraded. 2½" × 3".

Kha. i. E. 0067. a–d. Fresco frs. of heads and shoulders of small seated Buddha figs. Parts of series of such figs. Condition fair. (*a*) 3″ × 3″; (*b*) $3\frac{1}{2}$″ × $1\frac{3}{4}$″; (*c*) $4\frac{1}{2}$″ × $2\frac{1}{4}$″; (*d*) $2\frac{1}{4}$″ × $1\frac{3}{4}$″.

Kha. i. E. 0068. Fresco fr., showing elongated ear and part of shaven head of nearly life-size fig. At back of head are upward-growing imbricated leaves coloured buff, red, green, vermilion. Work rough. 4″ × $2\frac{1}{2}$″.

Kha. i. E. 0069. Fresco fr., showing lower part of face and neck of dark-skinned, green-robed Buddha fig. Halo light. Good work. Much abraded. $2\frac{1}{2}$″ × $2\frac{3}{4}$″.

Kha. i. E. 0070. Fresco fr., showing R. ear and temple of light-skinned fig. with black hair on which is finely-shaped Mukuṭa. Side ornaments semicircular, chased in form of lotus, with double row of petals. In front a circular ornament contains a sort of crossed Vajra, the fourth arm forming a base. Visible eyebrow finely arched at outer end. Nimbus pale green. Extremely good work. Abraded. 2″ × 2″.

Kha. i. E. 0071. Fresco fr. of L. arm of large fig., wearing armlet with red jewel. Background dark grey, and band of white and blue visible to L. p. 4″ × $1\frac{1}{4}$″.

Kha. i. E. 0072. a–c. Fresco fr., showing portions of two seated Buddha figs., one robed in black, the other brown. Each is seated on a cushion decorated in chequer, the squares being coloured buff, green, and red, in such order as to form diagonal bands of colour. The two figs. are placed one in advance (below) and to L. p. of the other, and seem to form part of a general diaper of such figs. on a fine crimson ground. Work fairly good. Stucco extremely hard, porous, and mixed with long grass. $5\frac{3}{4}$″ × 6″.

Kha. i. E. 0073. Fresco fr., showing roughly painted Buddha head with black hair. Probably one of a series. 3″ × 2″.

Kha. i. E. 0074. Fresco fr., showing part of seated Buddha fig. contemplative, head turned $\frac{3}{4}$ to L. p. Blue robe, green and pink nimbus. White vesica green-bordered. Work rough but good. Broken away on all sides. Abraded. $5\frac{1}{4}$″ × 5″.

Kha. i. E. 0075. Fresco fr., showing portion of head of fig. against a halo of conventional flames. No nimbus. Slight decorative features generally of a rectilinear type. The whole outlined in black, and most of the colour faded. Abraded. 5″ × 5″.

Kha. i. E. 0076. Fresco fr., showing above a blue Padmāsana on which is lower part of black-robed seated fig. Background red. Below this a broad buff band, under which is ground of mottled red and black spotted with white and buff, possibly in imitation of granite. 5″ × 5″.

Kha. i. E. 0077. Fresco fr., showing to R. p. part of circular background of red, bordered with light blue. To L. p., white ground on which appear portion of topknot bound with white, blue halo, and upraised L. arm of Bodhisattva. Two other upraised hands are to R. p., of which one may belong to Bodhisattva, and edge of green nimbus. In style and treatment frs. exactly resemble Kha. i. E. 0048, and prob. belong to it. Abraded. 6″ × 4″.

***Kha. i. N. 001. Stucco relief fr.** Portion of vesica, flame-bordered, with upper part of fig. of crowned Gandharvī to R. in adoration. Face destroyed and top and L. side of vesica lost. Cf. Kha. i. N. 002. Hard stucco, burnt black. $3\frac{7}{8}$″ × $3\frac{1}{4}$″.

From same mould: Kha. ii. 0068; ii. N.W. 003.

***Kha. i. N. 002. Stucco relief.** Crowned Gandharvī, L., on lotus pedestal. Knees bent, hands clasped in adoration. Drapery, rendered by narrow grooves, follows lines of body; stole flows from under armpits to R. and L. in long tails. Oval flame-bordered vesica. Frs. from R., L., and top of vesica missing. Prob. from colossal vesica; cf. *Anc. Khotan*, Fig. 64. xiii. Mud-coloured stucco (burned). $7\frac{1}{4}$″ × $4\frac{1}{4}$″.

From same mould: Kha. ii. 0026, 0066; ii. C. 003; ii. N.W. 004, 006; ii. W. 002, 003.

Kha. i. N. 003. Stucco frs., inscr. with Brāhmī (?) chars. No complete char. remaining. Largest fr. $1\frac{3}{4}$″ × 1″.

Kha. i. N. of c. (central) base. 001. Fr. of painted wood, in two pieces (now joined) split from thicker piece. Portions of three seated Bodhisattvas nimbate in vesicas. To R. p. (sawn end) robe light (prob. ochre), white nimbus, red field to vesica bordered by light bands, divided by red lines. Second fig. red robe, red nimbus bordered white, white vesica bordered as first. Third fig. nearly all broken away, border of vesica as first. Background (spandrels between vesicas) parti-coloured red and white. Hair, upper eyelids, and outlines of robes black. Flesh contour lines red. Ears elongated. Much damaged and broken away at L. p. end. Part of one edge chamfered. $10\frac{1}{2}$″ × $3\frac{1}{4}$″ × $\frac{3}{4}$″.

Kha. i. N. of c. base. 002. Fr. of painted wood, broken from larger piece. Surface split off from more than half its length. Seated Bodhisattvas similar to Kha. i. N. of c. base. 001, of which it may be a continuation. Darkened with sand and bad treatment. Rough chamfer at lower edge. $14\frac{1}{2}$″ × $2\frac{1}{2}$″ × $\frac{3}{4}$″.

Kha. i. N. of c. base. 003. Fr. of painted panel, same treatment as Kha. i. N. of c. base. 001. Topknot of one fig. and R. side of face of another. Soft, much damaged and discoloured. Part of edge chamfered. Joined with Kha. i. N. of c. base. 005. 6″ × $1\frac{1}{2}$″ × $\frac{3}{8}$″.

Kha. i. N. of c. base. 004. Fr. of painted wood, split from larger piece. Portions of two figs. similar to Kha. i. N. of c. base. 001, but slightly smaller in scale. On L., remains of pink nimbus, white vesica bordered yellow ochre (?). In centre, face and shoulders of seated Buddha with light nimbus; red vesica bordered ochre. Tilaka on forehead. To R. a similar fig. but red robe, shaded red nimbus, pale green (?) vesica bordered ochre (?).

Tilaka. Outlines as usual. Damaged on surface and split. One edge chamfered. $10'' \times 1\frac{5}{8}'' \times \frac{1}{2}''$.

Kha. i. N. of c. base. 006. Fr. of painted wood. Traces of paint, prob. figs. with haloes. Near centre a rough indication of a tapering pilaster with stepped base and cap. (Gandhāra style suggested.) Much effaced. Lower edge chamfered. Broken on all sides and split. $13\frac{1}{2}'' \times 2\frac{5}{8}'' \times \frac{1}{2}''$.

Kha. i. N. of c. base. 007. Fr. of painted wood, now joined to Kha. ii. 0079, showing portions of dome-shaped object with pennons. Fairly preserved. $6\frac{3}{4}'' \times \frac{11}{16}'' \times \frac{1}{8}''$.

***Kha. i. S.W. 001, 004 (joined). Stucco relief fr.** of lotus wreath. Cf. Kha. ii. 002; vii. 001; but has no dividing fillets. Elongated petals separated longitudinally by rows of five dots. Traces of red colour. Red clay. $8\frac{1}{2}'' \times 1\frac{5}{16}''$.

From same or similar mould: Kha. i. S.W. 002, 003, 009; i. W. 009.

Kha. i. S.W. 003. Stucco relief fr., similar to Kha. i. S.W. 001, 004 (joined); q. v. $4\frac{1}{2}'' \times 1\frac{1}{4}''$. Pl. XVI.

***Kha. i. S.W. 005–007 (joined). Stucco relief frs.,** forming border inside wreath of vesica. Beaded border with lotus petals springing from it inwards. Cf. Kha. vii. 001 and Kha. i. E. 003. Red clay. $8'' \times 2\frac{1}{8}''$.

From same mould: Kha. i. S.W. 008, 0013.

Kha. i. S.W. 0010. Stucco relief fr. Seated Buddha on lotus flower; hands clasped on lap. Behind, halo with concentric bands, each orn. with succession of short crescents. Outside, flame border. Top and L. side of vesica missing. Cf. Kha. i. S.W. 0011. Clay, burned dull red. $5'' \times 4\frac{1}{2}''$. Pl. XV.

Kha. i. S.W. 0011. Stucco relief fr. Replica of Kha. i. S.W. 0010. Vesica has triangular top. Most of R. side missing. Surface much decayed. Clay, burned dull red. $6\frac{1}{4}'' \times 4\frac{1}{2}''$.

Kha. W. 001. Fr. of painted wood, in two pieces, now joined. Painted on one side. Portion of kneeling fig. similar to Kha. i. 195. Fairly hard. $8\frac{1}{4}'' \times 3''$.

Kha. i. W. 001. Stucco fr.; slightly convex face with traces of gold leaf. Stucco fine and white. $3'' \times 2\frac{1}{2}''$.

Kha. i. W. 008. Stucco relief fr. of lotus wreath. Sections painted alternately red and green. Fillet appears to have been gilded. Colour well preserved. Same mould as Kha. i. 009. White stucco. $2\frac{1}{4}'' \times 1\frac{1}{4}''$.

***Kha. i. W. 0010. Stucco relief fr.,** conventional cloud or foliage pattern. Background light green. White stucco. $2\frac{1}{8}'' \times 1\frac{7}{8}''$.

From same mould: Kha. i. W. 0013.

***Kha. i. W. 0012. Stucco relief fr.** of standing Buddha; L. hand by side, R. hand raised in attitude of protection. Low relief but good work. Upper garment painted dark crimson-brown, lower garment light green. Hands and legs below drapery gilded. Colour in good condition, except gilding which is cracked and peeling. Head, shoulders, R. arm, and feet missing. White stucco. $4\frac{5}{8}'' \times 3''$.

From same mould: Kha. i. W. 002, i. E. 0017.

Kha. i. W. 0014. Stucco relief fr. of colossal hand (?); part of three fingers remain and have been gilded; red lines are painted over gilding to emphasize division of fingers. Very fine hard white stucco; traces of linen backing. $3\frac{7}{8}'' \times 3\frac{9}{16}''$.

Kha. i. W. 0015. Stucco relief fr. of hair, with five small snail-shell curls. Surface badly preserved. White stucco. $1\frac{7}{8}'' \times 1\frac{3}{8}''$.

***Kha. i. W. 0017. Stucco relief.** Gandharvi flying R. Hands raised holding wreath which crosses front of body. Nude except for bead necklace with large pendant and girdle with bead fringe. L. forearm and legs below thighs missing. Traces of colour, flesh white with features outlined in red, hair black, wings green, wreath pink, background blue-grey. White stucco. $3\frac{7}{8}'' \times 4\frac{1}{4}''$.

From same mould: Kha. ii. N.W. 005. Cf. Kha. i. C. 0039.

Kha. i. W. 0018. Fr. of painted wood split from larger piece. Traces of deep red, pink, and black contour lines. Portion of L. foot seems indicated. Prob. part of standing Buddha fig. on red lotus. Hard. Twisted grain. $4'' \times \frac{5}{8}'' \times \frac{9}{16}''$.

Kha. i. W. 0019. Fr. of painted wood, prob. part of Kha. i. W. 0018, the character of painting being similar. Decorative detail. Bright green leaf or feather-like piece, outlined boldly with sweeping black lines. On one side of this, dark and light pink band outlined black. Ground, umber. Wood hard. Grain twisted. $3'' \times 2'' \times \frac{1}{2}''$.

Kha. i. W. 0020. Wooden flame-tongue from border of vesica. Leaf-shaped. Has itself border of tiny relief flames on each surface. Traces of paint on one side. Both edges chipped. $4\frac{3}{4}'' \times 1\frac{7}{8}'' \times \frac{1}{2}''$.

Kha. i. W. 0023. Fr. of painted panel. Top of head of Buddha. Flesh yellow; features red; hair, eyebrows and eyelashes black; jewel on forehead red. Nimbus and vesica in two shades of red, pink, and white. $3\frac{3}{4}'' \times 1''$.

Kha. i. W. 0024. Fresco fr. To R., part of robe (maroon) with white and black linear markings, perhaps to indicate scales of armour, and foot (?), pink shaded, of standing warrior (?). To L. white hanging drapery outlined red, and beyond again, L., touch of green and crimson. $5\frac{1}{2}'' \times 5\frac{1}{4}''$.

Kha. i. W. 0025. Fresco fr. Part of vesica, decorated with brown, green, and pink chevrons, separated by white dashes to suggest a crimped edge to each overlapping piece. Brown border to L. p. $5'' \times 5''$.

Kha. i. W. 0026. Fresco fr., prob. of breast of large fig. Necklet of alternate small seeds in pairs and single large ones. A green jewel pendant. Two ovoid orna-

ments studded with green gems held in lotus-pattern settings, with upward-pointing leaves projecting on each side and top. Broken away on all sides. All ornaments outlined red and coloured yellow. Well preserved. 3¾" × 2⅜". Pl. XI.

Kha. i. W. 0027. Fresco fr. of enrichment, representing woven fabrics covering a cushion. Some green lotus petals appear above. A grey band, powdered with a regularly arranged pointed quatrefoil pattern in white, divides the upper from lower parts of cushion. The upper is pinkish buff with circular spot pattern in dark grey outlined and detailed with white. The lower is a hanging valance of overlapping V-shaped pieces. The first row is dark pink with pattern (embroidered?) in brown and white. The second, showing between the first, is blue with white rosette, spots, and edging. The third, deep rich maroon, on which hang pendants of long drop shapes in white. Much abraded. 6½" × 6".

Kha. i. W. 0028. Fresco fr. of large composition. Head and shoulders of Bodhisattva, head ¾ to L. p. Long ears; short black hair; Uṣṇīṣa; Tilaka; eyes long and downcast. Necklet yellow, star-like ornaments in front of shoulders. Nimbus yellow, cone-shaped, bordered with red band from the outer edge of which, growing inwards, is a series of long crocket-like leaves in threes, two scrolling in opposite directions, and the third between them scrolling upwards. In each case outer leaves are green and mid one grey-blue. All outlined in black and white. Vesica bright green, red-bordered. Background to L. p. black. To R. p., partly black and partly red. Above to R. p. on a polychrome narrow-petalled Padmāsana, the crossed legs of a fig. wearing short red *dhōtī*. Bare shins ornamented with simple pattern (Vajra?) in yellow, outlined red. The feet have not the soles up, but rest on Padmāsana. Below this, on red ground, three lines Brāhmī (about 16 chars.), in faded black. See Appendix F. Much broken. 13½" × 12".

Kha. i. W. 0029. a–e. Fresco frs. of rows of seated Buddha figs. all with heads ¾ to R. p. (*a*) shows part of two rows, the upper dark brown-robed, the lower light red. (*b*) Brown-robed (head and shoulders only visible). (*c*, *d*, *e*) light red-robed. Abraded. (*a*) 5¼" × 3"; (*b*) 6" × 3½"; (*c*) 5¼" × 3¼"; (*d*) 5¼" × 3¾"; (*e*) 3¼" × 3½".

Kha. i. W. 0030. Fresco fr. of face, showing R. eye half closed and very long. Scale about two-thirds life. Flesh dark pink. No shading. 2" × 1¾".

Kha. i. W. 0031. Fresco fr. of head of seated Buddha fig., on blue nimbus, white-edged. 1½" × 1⅜".

Kha. i. W. 0032. Fresco fr. of head of seated Buddha fig. Very yellow flesh, crimson nimbus. 1½" × 1⅜".

Kha. i. W. 0033. Fresco fr. of large detail. Three irregular bands of colour—dark green, dark pink, and Indian red. On pink a rough snake-like scroll in brown and white. Other portions plain. Green, outlined black. Colours rich. 3¼" × 3".

Kha. i. W. 0034. Fresco fr. Triangular tab of valance, rich red, orn. similarly to Kha. i. C. 0074. Abraded. 4" × 2½".

Kha. i. W. 0035. Fresco fr., showing much effaced seated Bodhisattva fig. in red outline, with long black hair. Turban-like Mukuṭa, necklaces, and cord or stole across body. Hands in lap. Arms and most of upper part of body nude. Legs and feet missing. Nimbus vertical elliptical. Fairly good work. Backing, brittle clay with very small admixture of fibre. Much abraded. 3" × 2¼".

Kha. i. W. 0036. Fresco fr. showing flowing draperies of standing fig., leg part only. Colours blue, green, and brown; outlines black. Style similar to Bodhisattvas of Indian type on silk paintings from Tun-huang. Much abraded. 3" × 2¾".

OBJECTS EXCAVATED AT RUINED SHRINE KHA. ii

Kha. ii. 4. Painted wooden panel. To R. p. four-armed Gaṇeśa, seated on bolster-shaped *āsana*, and turned ¾ to L. p. Lower L. arm rests on thigh; upper L. arm holds circular object. Lower R. arm holds long radish at breast; upper holds circular object like *chakra*. Long cloth-like ears hang to shoulders in regular tubular folds. Stole twined round lower arms. *Dhōtī*, blue with white (or faded pink) girdle. Head blue, straight tusks, and short curled trunk. Body thin and nude. Mukuṭa composed of petal-shaped forms, below which, on forehead, is black hair. Armlets and bracelets; nimbus.

To L. p. a Gandharvī fig., human to waist, below which is kilt of blue petals with pink centres. From below this proceed gracefully curling leaves and scrolls in blue, white, and pink. Round waist a girdle of small petals. Short-sleeved close-fitting *kurta* covers body, and trumpet-shaped blue cuffs, above elbow, finish sleeves. Long black hair; elongated ears; face (full) pink; Mukuṭa of lobate forms with frontal jewel. Hands together before breast in attitude of veneration. Nimbus, blue.

Background white. The whole very faded and abraded. Much of the colour prob. faded out. *Rev.* blank. 9¾" × 6¾" × 1". Pl. XIV.

Kha. ii. 22. Fr. of hard stucco, concave, painted pink. Adhering to it, back and front, much sand and frs. of paper with Brāhmī writing. 8" × 6" × 1½–2".

Kha. ii. 23. Fr. of hard stucco inscribed with Brāhmī chars. See Appendix F. 4½" × 2½".

***Kha. ii. 001. Stucco relief fr.,** from border of vesica, one of many. Vesica apparently had triple border of flame pattern, two bands painted red and one green or *vice versa*. Bands cast separately, all from one mould.

Several vesicas represented. Flames represented by curved tongues with central ribs, moulded in strips. $2\frac{1}{2}'' \times 3''$.

From same mould: Kha. ii. 001, 003, 005. a, 0015, 0016, 0024, 0025, 0026, 0043, 0044, 0045, 0046, 0047, 0048, 0049, 0050, 0051. a, b, 0090; C. 006. All these are taken from the mould of which Kha. i. 0015 is part, or from the replica Kha. ii. 0075.

***Kha. ii. 002. Stucco relief fr.** of lotus wreath or fasces. Prob. from edge of vesica. Strip half-round in section, tied at intervals of $1\frac{1}{8}''$ with one plain and one bead fillet. Between bands, single rows of rounded lotus petals with prominent lobes; pointed leaves show between. Traces of crimson and of orange colour. White stucco. $5'' \times 2\frac{1}{8}''$.

From same mould: Kha. ii. 007, 0013, 0064, 0087. Cf. Kha. i. 009; i. S.W. 001; vii. 001; ix. 0016.

Kha. ii. 004. Circular box of turned wood, with rebate for lid. Broken in three pieces; one fr. missing from side and bottom. H. $1\frac{1}{4}''$; diam. at bottom $3\frac{1}{2}''$; at top $3''$.

***Kha. ii. 006. Stucco relief fr.** 'Snail-shell' curl from head of large human fig. Hard white stucco, rather coarse. $1\frac{5}{8}'' \times 1\frac{1}{4}''$. From mould Kha. ii. 0076.

From same mould: Kha. ii. 0020, 0021, 0069. a–d; ii. N. 0010.

Kha. ii. 0010. Stucco relief fr. Flame pattern, in leaf-shaped mass, painted green. Probably from vesica; cf. Kha. vii. 002, 003. White stucco. $2\frac{1}{2}'' \times 2\frac{1}{4}''$.

Kha. ii. 0011. Fr. of painted panel, split off thicker piece. Small patches of colour. Part of face (L. side) showing L. ear, eye, and part of hair. Flesh pink, hair black, eyelashes and eyebrows black. Other contours red. Nimbus pink, background bright green and bright orange red. A small patch of yellow ochre to L. p. Colours very brilliant. Much effaced. Wood rather soft. $6\frac{1}{4}'' \times 1'' \times \frac{3}{16}''$.

Kha. ii. 0014. Stucco relief fr. 'Snail-shell' curl with large fr. of unworked stucco. White stucco. $3'' \times 2\frac{1}{4}''$.

Kha. ii. 0017. Stucco relief fr. of lotus petal. Lobes and central rib very prominent. Traces of crimson paint. Hard white stucco. $4'' \times 3''$.

Kha. ii. 0018. Fr. of wall stucco, upper part smooth, lower rough. On former are four cursive Brāhmī characters, in black paint. See Appendix F. $4\frac{3}{4}'' \times 2\frac{1}{4}''$.

Kha. ii. 0020. Stucco relief fr. from colossal head, with one 'snail-shell' curl. Hard white stucco. See Kha. ii. 006. $2\frac{1}{2}'' \times 2\frac{1}{2}''$.

Kha. ii. 0021. Stucco relief fr. from colossal head, with three applied 'snail-shell' curls. See Kha. ii. 006. $3\frac{1}{4}'' \times 3''$.

Kha. ii. 0022. Stucco relief fr., with eight 'snail-shell' curls smaller in size than those of Kha. ii. 006. Hard white stucco. $3'' \times 3\frac{1}{4}''$.

Kha. ii. 0023. Stucco relief fr. of standing Buddha. Only L. breast with thumb of L. hand raised to breast remains. Drapery red. White stucco. $2\frac{3}{4}'' \times 1\frac{1}{2}''$.

Kha. ii. 0027. Stucco relief fr. Topknot of linen; red clay with fibre admixed, white slip. Cf. A.T. 0087. $2\frac{1}{2}'' \times 2\frac{1}{8}''$.

Kha. ii. 0028. Stucco relief fr. of Gandharvī L., on lotus pedestal, in adoration. Head and upper part of vesica lost and whole broken across. Traces of colour remain; red for flame border, green for background of vesica, black for stole and hair, red for lower drapery, pink for lotus. Fairly hard white stucco. $6\frac{3}{4}'' \times 4\frac{3}{8}''$.

Kha. ii. 0029. Stucco relief fr. Fig. of Buddha in very low relief. R. hand raised, L. arm bent at elbow and hand rests on L. breast. Slight traces of gold leaf show fig. was gilded. On L. side fr. of blue halo. Head and feet missing (head resembled Kha. i. 0022). White stucco. $5\frac{1}{2}'' \times 3\frac{1}{4}''$.

Kha. ii. 0030. Stucco relief fr. Upper part of Gandharvī with nimbus. Breast nude, arms raised level with shoulders, forearms bent upwards perpendicularly. Hair gathered in topknot, black. R. forearm and all below breast lost. White stucco. $2\frac{1}{4}'' \times 2\frac{1}{2}''$.

***Kha. ii. 0031, 0062 (joined). Stucco relief fr.** of drapery border. Series of gently curved and of flowing S-folds alternating, giving scalloped effect to edge of drapery. Surface originally black; under-side, where shown, red. White stucco. $3\frac{1}{2}'' \times 8\frac{1}{4}''$.

From same mould: Kha. ii. 0061; ii. N. 002, 003, 004, 005, 0018.

Kha. ii. 0032. Stucco relief fr. of double layer of drapery, with very conventional system of curved parallel folds. White stucco. $3\frac{3}{4}'' \times 2\frac{3}{4}''$.

Kha. ii. 0033. Stucco relief fr. Thumb of L. hand of life-sized fig. Red clay mixed with fibre. White slip. Length $3\frac{3}{4}''$.

Kha. ii. 0034. Stucco fr. Finger, about life-size. Red clay. Much damaged through salt. Length $4''$.

Kha. ii. 0035. Stucco fr. Long thin second finger from life-sized fig. Red clay. Length $4''$.

Kha. ii. 0036. Stucco fr. Little finger from life-sized fig. Very rude; red clay. Length $2\frac{3}{4}''$.

Kha. ii. 0037. Stucco fr. Bent finger from life-sized fig. White stucco. Length $3''$.

Kha. ii. 0038. Wooden key, of usual form with borings for seven ward-pegs; ::·:, but without pegs. Cf. Kha. v. 006. Soft but well preserved. $4'' \times \frac{7}{8}''$.

Kha. ii. 0039. Stucco relief fr., circular orn. of head-dress or turban. Outside is border of drapery, terminating above in finial. Within is beaded border enclosing space $2\frac{1}{8}''$ diam. In this, amid conventional foliage, is human head with large ears and head-dress. White stucco. $4\frac{3}{4}'' \times 3''$. Pl. XVI.

Kha. ii. 0046. Stucco relief fr. of vesica border; three bands of flame pattern. See Kha. ii. 001. White stucco. $5'' \times 4\frac{1}{4}''$. Pl. XVI.

Kha. ii. 0054. Stucco relief fr. Bead and lotus-petal border. See Kha. i. E. 003. $3\frac{1}{2}'' \times 2\frac{1}{4}''$.

Kha. ii. 0059. Stucco relief fr. of drapery, with series of curved horizontal, between stiff vertical, folds. Cf. Kha. vii. 006; ii. 0060. Hard white stucco. $6'' \times 4\frac{3}{4}''$.

Kha. ii. 0060. Stucco relief fr. of drapery, from same mould as Kha. ii. 0059. Hard whitish stucco. $5'' \times 5\frac{1}{2}''$.

Kha. ii. 0061. Stucco relief fr. of drapery. See Kha. ii. 0031; with traces of dark red colour. Hard white stucco. $2'' \times 3\frac{1}{2}''$.

Kha. ii. 0063. Stucco relief fr. of colossal human face; all below upper lip, with L. side of face and whole of brow, lost; R. side of nose also split off. Eyes large and prominent; nose short but with well-marked bridge; cheeks flat and without modelling. Lip shows traces of black painted moustache. Hard white stucco. $5'' \times 5\frac{1}{4}''$.

Kha. ii. 0065. Stucco relief fr. of lotus petal, prob. from bead and lotus-petal border; traces of pink slip remain, outlined with vermilion. Soft white stucco. $2\frac{1}{8}'' \times 2\frac{1}{8}''$.

Kha. ii. 0066. Stucco relief. Crowned Gandharvī to L., on lotus pedestal, in act of adoration. Top of vesica and face broken away. Traces of red paint on tunic and black on stole. Light grey stucco; white body wash. Surface much damaged. See Kha. i. N. 002. $8\frac{1}{2}'' \times 5''$.

Kha. ii. 0067. Stucco relief. Disc with seated Buddha. Upper part of disc (with head of fig.) and R. side lost. Fig. seated on cushion, hands in lap. Much perished. Same mould as Kha. i. 007. Clay. $2\frac{1}{4}'' \times 2''$.

Kha. ii. 0069. a–d. Stucco relief frs. Four 'snail-shell' curls; see Kha. ii. 006. Hard white stucco. $1\frac{1}{2}'' \times 1\frac{1}{2}''$.

Kha. ii. 0071. Stucco fr. R. arm (free) slightly bent, with hand open. Fracture seems to indicate arm was held at height of shoulder, forearm projecting v. slightly to front. Red clay with some fibre. Length $2\frac{3}{4}''$.

Kha. ii. 0074. Lower part of stucco mould, for bead and lotus-petal border. See Kha. i. E. 003. On back incised mark ×. Hard white plaster. $6\frac{1}{2}'' \times 5\frac{1}{4}''$. Pl. XVI.

Kha. ii. 0075. a–c. Frs. of mould, for upper half of vesica with triple flame-pattern border. Hard white plaster. Made from same original as Kha. i. 0015. From it are Kha. ii. 001, etc. $10\frac{1}{4}'' \times 6\frac{3}{8}''$ (together). Pl. XVI.

Kha. ii. 0076. Half of quadrangular mould for casting spiral curls of hair. Hard white plaster. From this are cast Kha. ii. 006, 0020, 0021, 0069. a–d; ii. N. 0010. $4\frac{1}{4}'' \times 5\frac{1}{8}''$. Pl. XVI.

Kha. ii. 0077. Fr. of mould, for casting pieces of drapery similar to Kha. ii. 0059–60 (from slightly different mould). Hard white plaster, somewhat worn. $3\frac{1}{2}'' \times 4\frac{1}{8}''$.

Kha. ii. 0078. Fr. of painted panel with much damaged traces of paint (white or pale pink). Portion of Padmāsana in black outline. Rough work. *Rev.* blank. Wood fairly hard. Shows abrasion on rev. $6\frac{5}{8}'' \times 2'' \times \frac{3}{8}''$.

Kha. ii. 0079. (Now joined to Kha. i. N. of c. base. 007.) **Fr. of painted panel** containing portion of domed object with pennons similar to Kha. 002. $5\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

Kha. ii. 0080. Fr. of painted wood, from thick piece, showing patches of brilliant colour on obv. The colours used are pink, red, cobalt-blue, pale green, fawn, black and white. On one part is a small portion of imbricated work of fawn colour outlined in black, within which a white line. Each scale seems to have had a short mid-rib of black. The whole is too fragmentary to convey any meaning. Wood hard. Length of painted surface $4''$; width $\frac{3}{8}''$–0; length over all $7\frac{1}{4}''$; width $1\frac{3}{4}''$; thickness about $\frac{3}{16}''$.

Kha. ii. 0081. Fr. of painted panel. R. side head, shoulder, and breast of Buddha fig. Head, $\frac{3}{4}$ to L., slightly down. Flesh pink; contours red; hair (high, topknot), eyebrows, eyelashes, and centre of eyes black. Ear elongated, or perhaps ear orn. Robe dark red, white line round edge (turned over). Nimbus brown bordered by white lines. Vesica dark green with white edge. Background red. Above fig., a portion of straight Padmāsana, and above this again indications of further painting. Painting well preserved. Wood hard. Length $6\frac{7}{8}''$; width $1\frac{1}{2}''$; thickness $1''$.

Kha. ii. 0082. Wooden upright of baluster (?). Similar to Kha. ii. 0083, but on slightly smaller scale. Very rotten. $7'' \times 2\frac{3}{8}'' \times 1\frac{1}{2}''$.

Kha. ii. 0083. Wooden upright of baluster (?). Bottom end cut off at 45° angle with projecting tenon. Divided into three cubical parts (lowest bisected) separated by a pair of triple mouldings. Top cube, much broken. Two upper cubes have each two mortices on opposite faces to take connecting bars. The half cube has only one mortice. Cf. Kha. ii. 0082. $8\frac{1}{2}'' \times 2\frac{1}{2}'' \times 1\frac{3}{4}''$. Pl. XVII.

Kha. ii. 0088. Stucco relief fr. of first and second fingers of R. hand, slightly bent. Clay, burned red, showing on back an inner core of grey mixed with straw. White slip with red markings. Length $4\frac{1}{2}''$; greatest width of finger $1''$.

Kha. ii. 0089. Stucco relief head of Buddha. Features much damaged, but show that treatment was as in Kha. i. 001. White stucco. H. $2\frac{1}{2}''$.

Kha. ii. 0091. Fr. of turned wooden baluster. In centre, broad flat moulding and three narrow ridges; on each side, umbrella mouldings facing away from centre. *C.* $\frac{1}{2}$ of circumference left. Both ends broken. Length $5''$; diam. $1\frac{3}{4}''$.

Kha. ii. 0092. Fresco fr., having its L. p. half occupied by vertical bands of colour, buff, red, light brown, dark brown. To R. p. a seated Buddha fig. in meditation, unusually robed. A dark grey chiton is worn, passing below the R. arm, and held by white *kamarband* at waist. The usual mendicant's brown robe is over shoulders and envelops legs. In lap is dark brown object, partly broken away. Hands are completely hidden, and there is no indication of their position. Vesica bright blue, bordered with faded colour. Background pale green. Nimbus pink. Good work. 6" x 6½".

Kha. ii. 0094. Fresco fr. Above, row of petals (white and red) of lotus throne. Below, head of seated (?) Buddha. Flesh white, outlines red. Nimbus red and white. Background red. 7½" x 6".

Kha. ii. 0095. Fresco fr. Seated Buddha, ¾ to L. p. Brown robe, white vesica. 2¾" x 2".

Kha. ii. 0096. Fresco fr. Part of head of Bodhisattva looking L., wearing Mukuṭa. Grey and pink nimbus. Green and dark red vesica. Brown border with small floral spot pattern. 2½" x 2½".

Kha. ii. 0097. Fresco fr., prob. of arm of fig. wearing armlet with jewelled bosses at intervals. Jewels red and blue. Remainder of ornament yellow, outlined red grey. Three coats of paint are present. The orig. whitewash, over which a coat of dark red. On this red the pale pink or creamy white of arm is painted. 2¾" x 2½". Pl. XI.

Kha. ii. 0099. Fresco fr. of hard stucco showing upper part of seated Buddha. Above, roughly indicated, architectural design. To R. a pillar, apparently supporting angle of building. Practically all in black outline only. Rough and poor work. 5½" x 5".

Kha. ii. C. 001. Stūpa model, of soft greyish clay, cone-shaped, but divided into five equal parts by bands or stories. One side has accidentally (?) been cut flat. Near point small fr. of paper with Brāhmī (?) characters adheres. Cf. Kha. ii. C. 007-9. H. 2½", diam. of base of cone 1¾".

Kha. ii. C. 002. Stūpa model, with concentric rings and central reed core, as Kha. ii. C. 001, but in perfect state. Impress of stamp below (plain). Soft whitish grey clay. 2½" high.

Kha. ii. C. 003. Stucco relief fr. of crowned Gandharvī, to L., on lotus pedestal in act of adoration. Head with top and R. side of vesica lost. Hard white stucco, with traces of paint; tunic red, stole black, background green, lotus pink, flame border red. See Kha. i. N. 002. 5¾" x 4".

Kha. ii. C. 004. Stucco relief fr. Bead and lotus-petal border. See Kha. i. E. 003. 5" x 3⅝". Pl. XVI.

Kha. ii. C. 005. Stucco relief fr. Top of lotus throne, L. hand, and part of body of seated Buddha. Edge of throne, and hand, white; rest red. 3⅜" x 3".

Kha. ii. C. 007. Stūpa model in clay. Cf. Kha. ii. C. 001. Three chips out of base. Paper with characters adhering near top. H. 2⅛"; base diam. 2⅛".

Kha. ii. C. 008. Stūpa model. Cf. Kha. ii. C. 001. Large fr. missing on one side. Twig core. No paper. Trace of inscription in relief on base (Tibetan ?). H. 2"; diam. 2".

Kha. ii. C. 009. Stūpa model. Cf. Kha. ii. C. 001. Complete. Near base and halfway up side frs. of paper adhering, one bearing characters. Irregular cone; no twig core visible. H. 2¼"; diam. of base 2¼".

Kha. ii. C. 0010. Fresco fr., showing one of row of seated Buddhas. Poor conventional work. Red robe, green vesica, white nimbus. Flesh and lotus (straight row of petals) yellow. Background red. Next fig. to R. had background green and vesica red. 5½" x 6".

Kha. ii. C. 0011. Fresco fr. Above in centre white tassel or knob, on green (water). R. and L., ends of lotus thrones (?). Below, band with four-petalled rosettes, alternate green and grey petals on buff. Below again, brown band. 5" x 4½".

Kha. ii. E. 6. Frs. of three sheets of paper, which had stuck together. Top sheet had painted picture,—light green, buff, and red, with black outlines,—but pieces too fragmentary to show subject. Under-frs. show Brāhmī writing. Soft and decayed.

Kha. ii. E. 001. Stucco relief fr. Conventional acanthus-like leaf. Remains of crimson paint. Red clay 2¼" x 2$\frac{1}{16}$".

Kha. ii. E. 002. Two frs. of stucco hands of life-size human fig. Larger consists of first and second fingers and part of R. hand; smaller is from L. hand. Each finger formed of red clay mixed with fibre, round central wooden skewer. White slip. Modelling of nails and back of hand shows great care and skill. Larger fr. 5" x 2½"; smaller fr. 2¾".

Kha. ii. E. 003. Stucco relief fr. Two concentric rings. Red clay mixed with fibre. White slip. Diam. 3". Diam. of central opening 1½".

Kha. ii. E. 004. Fr. of thick painted panel on which are part of two horizontal rows of seated Bodhisattvas. One complete fig. and portion of another beside it, with prob. the tops of two similar figs. below. First (to L. p.) fig. in attitude of contemplation, hands resting in lap. Robe dark red. Flesh pale. Hair, eyebrows, upper eyelashes and eye, black. Flesh contours red. Ears elongated. Field of vesica light red. Nimbus colour missing. Background colour missing. Second fig. similar, but robe light red, vesica green (?), background light red. The figs. are seated on a continuous yellow Padmāsana. The change of colour in background is divided by a vertical red line. *Lower Register.* First, part of head of fig. as above. Background light red. Vesica white. Second, part of hair, black. Vesica dark red. Background

white. The end of panel (thickness) seems to have a continuation of the painting, but indistinct. Wood hard and worm-eaten. H. 6¼″; width 5⅛″; thickness 1$\frac{5}{16}$″.

Kha. ii. E. 005. Fr. of painted wood, split from surface of thick piece Lower portion of dark (green?) upper robe of Bodhisattva, with kilted under-garment hanging below (pink). Outlines black, with one white line sweeping round one of lower folds of upper robe. Same treatment and prob. same personage as D. I. 04 in *Anc. Khotan*, Pl. LXV. Much defaced. Wood hard. 7″ × 2⅜″ × ¼″.

Kha. ii. E. 006. Fr. of painted wood, split from thick piece. Prob. represents drapery of standing fig. Part to L. p. is dark green with pattern of groups of four circles in white, placed diamond-wise, the edge of the green outlined with white. Adjoining part is rich dark red, orn. in the same way. Rough work. Well preserved. 6⅝″ × 2″ × ¼″.

Kha. ii. E. 007. Fr. of painted wood, split from surface of larger piece. Traces of colour, bright green, pink, and red contour lines. Wood moderately hard. 3¾″ × 1$\frac{3}{16}$″ × ⅛″.

Kha. ii. E. 008. Fr. of painted wood, split from thick piece. Small part of painted surface present. On white ground, on upper part of fr., portion of Padmāsana (?) and three toes of standing fig. One petal pale green. On lower part a few indistinguishable black lines showing imbrications running laterally and a patch of green. Wood hard. 8″ × 2½″ × ½″.

Kha. ii. E. 009. Fr. of painted wood, small, flaked from thicker piece. Prob. portion of robe, bright red. No detail. Wood well preserved. 2⅜″ × ⅝″ × $\frac{1}{16}$″.

Kha. ii. E. 0010. Small fr. of painted wood, flaked off larger piece, painted dark red-brown with a few light lines. Prob. portion of drapery. 2⅛″ × ⅜″ × ⅛″.

Kha. ii. E. 0011. Fr. of painted wood in two pieces (now joined), flaked from panel. Traces of colour, prob. part of fig. in red-brown robe against background of emerald green, bounded by borders of light chocolate colour and grey, divided by black and white lines, and transversely barred with black. Prob. pink nimbus outlined white. Well preserved. 5½″ × 2¼″.

Kha. ii. E. 0012. Fr. of painted wood, flaked from panel. Chocolate and grey bands and traces of green, divided by black and white lines and transversely barred with black. The chocolate is shaded. Evidently belongs to Kha. ii. E. 0011. Wood well preserved. Painting effaced from one half. 5¾″ × 2½″.

Kha. ii. E. 0013. Fr. of painted wood. Upper portion to waist of Buddha fig.; much of L. side split away. R. hand raised, back to breast. Head ¾ to R. p. Small portion of hair, short and smooth, visible. Upper part broken away. Flesh yellow, contours dark red. Eyebrows and lashes black. Ball of eye pink white. Eye centre black. Robes dark green. Background dark red. Nimbus light green with pink-white edge. Fingers much recurved at tips. Work rapid and vigorous. Painting defaced in places. Wood hard, but split and abraded at upper end. Length 10⅞″; width 3⅞″; thickness 1″. Pl. XIV.

Kha. ii. E. 0013. a. Fr. of painted wood, prob. part of Kha. ii. E. 0013. It shows dark grey-green drapery corresponding in colour and condition to that of fig. in example cited. To outer side of drapery a band of red background. Rev. rough and without painting. Both ends seem to have been cut through. Well preserved. 6⅛″ × 1½″ × 1″.

Kha. ii. E. 0014. Fr. of painted wood, with traces of flesh-colour, black and green. Soft. 1½″ × ⅝″ × ⅛″.

Kha. ii. E. 0015. Stucco relief. Swaddled fig., finger-shaped. Lower part has spiral channels representing drapery. Upper part shows head wearing pointed hood. Broken below and at points of hood. Rough work. Clay red. 6″ × 1½″ × 1″ to ⅞″. Pl. XVI.

Kha. ii. E. 0016. Stucco relief fr. of very large lotus petal and beginning of second outside it. Red clay. 4¼″ × 4¾″.

Kha. ii. E. 0018. a–l. Frs. of painted wooden panel; a–g show red drapery with black and white lines and a few traces of yellow (flesh-colour?); **h–k** show very dark red drapery with black and white lines; **l** part of L. side of face, yellow, with black hair, eyebrows and lashes; lines round eyes, nose and mouth red, white on eyeball. Gr. M. 7″ × 1½″.

Kha. ii. N. 19. Frs. of painted silk, fine, brittle. One shows lotus (flower has white petals, outlined red; leaf, blue centre, red outlines), with row of small leaves below (outlined black), several springing on each side of stalk. Another shows more leaves of same kind, with lotus leaf (blue centre, red outline) below. Another shows black ground, with pointed buff leaf, outlined red.

'Lotus' on first fr. is of Roman rosette type, having bases of petals continuous, the divisions forming loops or 'eyes', and the outer margin of each petal broad and indented like those of wild rose. Small grass leaves below are treated sketchily and have Chin. character. All frs. poor in execution, but silk fine. Gr. M. 2½″.

Kha. ii. N. 001. Stucco relief fr. L. hand rather above life-size; fingers bent as though grasping some object. Poor flat work. Hard white stucco. 5″ × 4¼″.

Kha. ii. N. 002. Stucco relief fr. of drapery border. Trace of red visible at ends of folds. See Kha. ii. 0031. Hard whitish stucco. 3⅝″ × 8⅞″. Pl. XVI.

Kha. ii. N. 003. Stucco relief fr. of drapery border. See Kha. ii. 0031, strongly convex. Hard white stucco. 10″ × 3¾″.

Kha. ii. N. 004. Stucco relief fr. of drapery border. See Kha. ii. 0031. Considerable remains of red. Hard whitish stucco. 3¼″ × 3⅜″.

Kha. ii. N. 005. Stucco relief fr. of drapery border. See Kha. ii. 0031. Hard whitish stucco. 3½″ × 3¼″.

Kha. ii. N. 006. Stucco relief fr. Upper part of front of skull, broken away immediately below eye-sockets. These are hollow and painted blue-black. Across brow a long narrow pattern painted, three parallel lines united by short cross-lines. Cf. Mi. xi. 0095, 0098. Hard white stucco. $3\frac{1}{8}'' \times 4\frac{3}{4}''$.

Kha. ii. N. 007. Fr. of painted wood of architectural framing (?). At one end the back shows a cut as for mitring, and part of mortice. Front surface smooth and painted with conventional scroll-work in cream-white and dull ochre, outlined with black on salmon-colour ground. Work very free. The type of scroll is that seen in Ajanta Cave paintings, but less carefully executed. Much ant-eaten at back, otherwise hard and well preserved. Length 15″; width $3\frac{1}{2}''$; thickness $1\frac{1}{2}''$. Pl. XIV.

Kha. ii. N. 008. Seated Buddha (?) in wood, carved in the round. Hands in lap. Inverted Padmāsana. On head a low hat with upturned brim. Flowing from beneath hat, and parted curtain fashion on forehead, is long straight hair, or, more probably, drapery forming a veil covering most of the ear and resting on shoulders and upper arms. Ears (lobe only visible below veil) elongated slightly. Face round and full. Upper R. part of head and hat broken away. R. side of face scored and defaced, obliterating R. eye, nose, and mouth. Neck short and thick. Body and arms prob. nude. Necklace of double row of square links. Stole crosses back, passes to front just above elbows and resting in fold of arm hangs down at back of haunches. Legs, from pelvis, draped. L. foot visible. Small remains of nimbus. L. knee and large part of Padmāsana burnt away. The whole bears very scanty traces of colour. The carving is somewhat rough. In bottom of Padmāsana is the portion of a chule which connected the fig. with some base. General style, Gandhāra. H. $8\frac{1}{2}''$; width at knees (as broken) $4\frac{3}{8}''$; thickness $2\frac{1}{2}''$. Fairly hard. Pl. CXXXVIII.

Kha. ii. N. 009. Stucco relief fr. Upper part of Buddha with halo, in attitude of protection. Hair painted black, drapery red. Larger in scale than Kha. i. 001, etc., which it otherwise resembles. White stucco. $3\frac{7}{8}'' \times 2\frac{3}{8}''$.

Kha. ii. N. 0010. Stucco relief fr. Three snail-shell curls on portion of scalp. See Kha. ii. 006. Hard white stucco. $2\frac{3}{4}'' \times 2\frac{3}{4}''$. Pl. XVI.

Kha. ii. N. 0011. Stucco model of oval almsbowl (?); lip simply rounded off; no base, but bottom pierced. Hard white stucco. $4\frac{1}{2}'' \times 3\frac{3}{8}''$; H. $1\frac{15}{16}''$.

Kha. ii. N. 0012. Stucco relief fr. Gandharvī flying to L., nude save for mantle over shoulders, and broad belt round hips. R. arm outstretched, L. lowered and bent at elbow. Wing coloured dark red visible in background; legs slightly drawn up from knees. Fig. holds double string of beads with rosette in centre across front of thighs. Head, forearms, foot, and background lost. Hard white stucco. $5\frac{3}{4}'' \times 2\frac{5}{8}''$.

Kha. ii. N. 0013. Fr. of stucco mould for casting open right hand. Thumb, first and part of second finger remains. Matrix faced with fine flesh-coloured slip. Hard white plaster of Paris. $6'' \times 3\frac{1}{2}''$.

Kha. ii. N. 0014. Circular stucco mould for casting small plaque of seated Buddha within lotus-leaf border. Fine white stucco. $3\frac{1}{8}''$ diam. Pl. XVI.

Kha. ii. N. 0015. Fr. of rect. painted panel, being L. p. upper portion. Near centre, head and shoulders of female fig., $\frac{3}{4}$ to L., with long veil-like head-dress, long black hair, a tress falling in front of ear. Nimbus. To L., part of face, $\frac{3}{4}$ to R., and upper part of body, of male fig., slightly smaller scale than the central fig. Green garment. To R. faint traces of head with green nimbus. Between this and central fig. some object represented by cross-hatched lines in red. The whole may represent the 'cocoon' incident (cf. *Anc. Khotan*, i. p. 229). Very badly defaced. $9\frac{3}{4}'' \times 2\frac{1}{4}'' \times \frac{3}{4}''$.

Kha. ii. N. 0016. Fr. of elliptical wooden Padmāsana in the 'round'. Toes and part of instep of R. foot of fig. Traces of colour. The toes are perfectly straight and jointless, but the nails clearly indicated. The under-side of fr. is flat, so that the fig. would prob. have stood firmly. There is a hole drilled upwards to a depth of about $1\frac{1}{4}''$ in which are remains of a wooden peg. Wood hard and well preserved. $4\frac{3}{4}'' \times 2'' \times 1\frac{3}{4}''$.

Kha. ii. N. 0017. Stucco relief fr. of adoring Gandharvī, R. Traces of red on drapery and vesica border. Pink on lotus pedestal. Head and R. side of vesica missing. Same mould as Kha. i. N. 001. $5\frac{1}{4}'' \times 3\frac{1}{2}''$.

Kha. ii. N. 0018. Stucco relief fr. of drapery border. Traces of red (inside) and black outside. Slightly concave. See Kha. ii. 0031. White stucco. $8'' \times 3\frac{1}{2}''$.

Kha. ii. N. 0019. Piece of stucco relief, representing overlapping pieces of leather (?) fastened one to another by studs, two at each end. End piece and one overlapping piece shown. Semicircular bite out of each overlapping edge. Bead border along one side edge. Representation of armour or belt; cf. *Anc. Khotan*, Pl. II. $3\frac{1}{4}'' \times 2''$.

Kha. ii. N. 0020. Fr. of wood-carving; L. wing from upright fig. Upper part covered with diamond pattern, each diamond-feather having central incised quill. Long feathers (three only show) curled up at end; each has plumage on one side of quill only. Regular chip-carving style. $6'' \times 2\frac{1}{2}'' \times \frac{1}{2}''$.

Kha. ii. N.W. 001. Stucco relief fr. Portion of human foot on fr. of crimson painted base; three toes alone remain. White stucco. $1\frac{3}{4}'' \times \frac{7}{8}''$.

Kha. ii. N.W. 002. Small knob of red clay, irregularly semi-spherical, hollow inside, and painted blue-black inside and out. H. $1\frac{1}{16}''$; diam. $1\frac{15}{16}''$.

Kha. ii. N.W. 003. Stucco relief. Crowned Gandharvī to R. in adoration. Cf. *Kha. i. N. 001. $7\frac{7}{8}'' \times 7\frac{1}{4}''$. Pl. XV.

Kha. ii. N.W. 004. Stucco relief. Crowned Gandharvī to L., on lotus pedestal, in act of adoration. Part of vesica above head is missing. Hard stucco burnt to greyish-black colour. See Kha. i. N. 002. $6\frac{7}{8}'' \times 4\frac{5}{16}''$. Pl. XV.

Kha. ii. N.W. 005. Stucco relief of Gandharvī, from same mould as Kha. i. W. 0017. Legs broken below drapery, and L. arm broken above elbow. No trace of paint. $4'' \times 3\frac{3}{4}''$. Pl. XV.

Kha. ii. N.W. 006. Stucco relief, adoring Gandharvī L., on lotus pedestal. Traces of colour, throne pink; flame-border to vesica, red; hair black, dress red, flesh pink, scarf black, background green. See Kha. i. N. 002. $7\frac{1}{2}'' \times 4\frac{1}{2}''$.

Kha. ii. N.W. 007. Stucco relief fr. Lower part of seated Buddha with hands clasped in lap. Robe red. Vesica (only traces) grey-blue. Lotus throne white. Behind, projection pierced vertically to take supporting rod. White stucco. $2'' \times 2\frac{3}{4}''$.

Kha. ii. W. 001. Stucco relief of Gandharvī, flying R. and holding garland. From same mould as Kha. i. E. 0028. Legs broken at knees, R. arm at elbow, and wings outside drapery. Head, halo, and L. arm complete. Traces of colour. Halo and wings red; hair black; drapery black; garland green and blue. Plaster of Paris. $5\frac{3}{4}'' \times 3\frac{1}{2}''$. Pl. XV.

Kha. ii. W. 002. Stucco relief fr. of adoring Gandharvī. Traces of colour show flesh pink, hair black, and inner part of vesica green. Broken below waist. See Kha. i. N. 002. $5\frac{1}{2}'' \times 3\frac{1}{2}''$.

Kha. ii. W. 003. Stucco relief fr. of adoring Gandharvī L. Feet missing and top of vesica. Hair and scarf black, robe red. See Kha. i. N. 002. $6'' \times 4\frac{1}{4}''$.

OBJECTS EXCAVATED AT MINOR RUINS OF KHĀDALIK

Kha. iii. 001. Stucco relief fr. Detached circular jewel with bead setting. White stucco. Diam. 2″.

Kha. iii. 002. Painted wooden panel, slightly split at both ends and on centre line, about $\frac{2}{5}$ from one end, where hole has been drilled. One corner broken away. Surface gone, leaving only faint traces of paint. No pattern visible. Soft and brittle. Length $8\frac{11}{16}''$; width $3\frac{1}{8}''$; thickness $\frac{1}{4}''$.

Kha. iii. 003. Part of rude disc of green malachite. Worn depression near centre. One edge badly chipped. Surface polished. Perhaps handle for fire-drill. $1\frac{1}{2}'' \times \frac{1}{4}''$.

Kha. iii. 004. Half of wooden food-bowl of turned wood, painted inside and out with blue-black paint. Fr. though soft is well preserved. Diam. 6″; H. $2\frac{1}{8}''$.

Kha. v. 4. Short wooden truncheon of hard heavy wood, well polished. In section it is octagonal; much thicker at end than at grip. The handle is pierced with two holes for a cord; striking portion much cut and scratched from use. Length $8\frac{3}{4}''$.

Kha. v. 001. Wooden key with pyramidal handle (pierced) $\frac{1}{2}''$ long, and oblong back with rounded ends $3\frac{3}{8}'' \times \frac{11}{16}''$; from back project six wooden pins : · · : each $\frac{11}{16}''$ high (one lost). Length of whole $3\frac{7}{8}''$. Cf. Kha. v. 006.

Kha. v. 002. Whisk-broom made of grass; stalks twisted together forming bundle. Brittle. (Cf. *Anc. Khotan*, ii. Pl. 73, N. x. 07.) Length 1′ 6″.

Kha. v. 003. a, b. Pair of wooden cantilevers. In upper part, four lozenge-shaped transverse holes. Below, row of relief lozenges with small volute at each end. Lowest part is remarkable, finished at each end with a volute, of which lower end is bent back outwards. Vertical hole through centre (diam. $2\frac{1}{2}''$), which in (*a*) still has upper part of shaft. This swells into ball just below cantilever, but is then broken short. $2' \; 8'' \times 10\frac{1}{2}'' \times 4\frac{1}{4}''$. Pl. XVII.

Kha. v. 004. Bag of cotton pods and raw cotton.

Kha. v. 005. Frs. of cotton fabrics coarsely woven, of various textures, dyed respectively red, brown, and buff (natural). Small hank of cotton string. Mass of ravelled yarn (cotton) mixed with small frs. of woollen felt. A burst cotton pod and a very hard fruit stone, an apricot stone, and a plum stone; pieces of twig. Largest fr. of fabric $14'' \times 1''$.

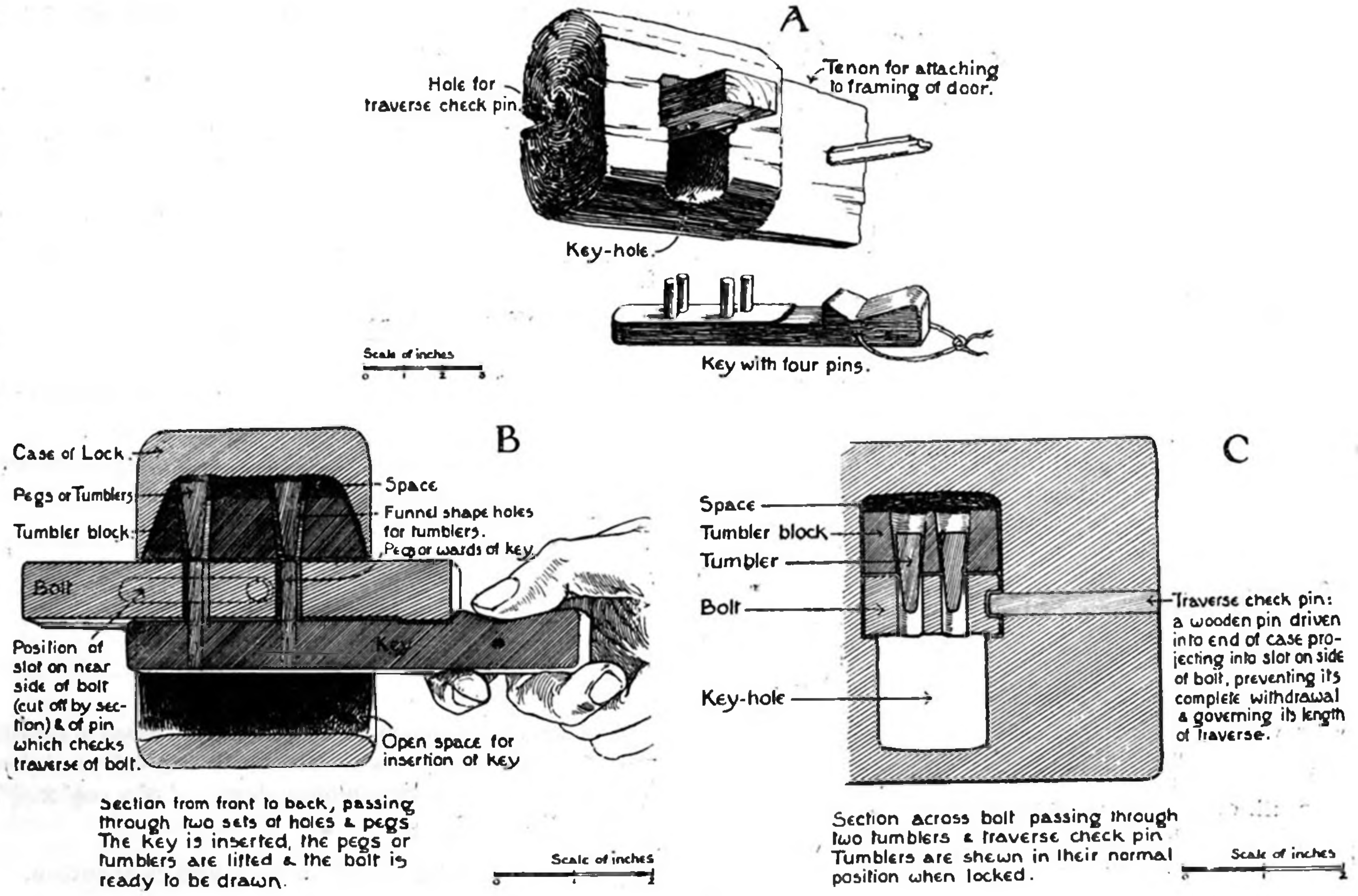
Kha. v. 006. Wooden lock with bolt, tumbler block, and three pegs. Constructed for four pegs. Key missing. $8\frac{3}{8}'' \times 4\frac{3}{8}'' \times 3''$ to $\frac{7}{8}''$. Pl. XVII.

The following note by Mr. F. H. Andrews describes the construction and working of the lock:

The lock consists of three principal parts (see Figs. A, B, C): (1) the body or case; (2) the tumbler block with its tumblers; (3) the bolt.

The Body is a heavy block, of oblong section and of a length sufficient for fixing to the door or lintel by means of a broad tenon provided at one end and pierced with two dowels (see Fig. A).

A hole for bolt and key runs transversely through the block, and is of rectangular shape, broader in its upper than in its lower part, the difference in width being effected by two shoulders on which the lower edges of the bolt rest and slide. In interior upper part of block or case, a hollow is excavated for reception of tumbler block, which is hidden from view.



The Tumbler Block is a hard piece of wood about $\frac{3}{4}''$ thick and $2\frac{3}{4}'' \times 1\frac{1}{2}''$ on its lower face, the upper slightly smaller by reason of the two shorter sides being chamfered upwards. In this block four funnel-shaped holes are drilled, narrow end downwards, and into these are placed four loose tapering pegs of hard wood $1''$ long and of such diameter that when allowed to drop, their narrow ends project through the holes for a length of $\frac{1}{2}''$, the broad ends preventing them from dropping completely through.

The Bolt is a relatively long rectangular prism of wood with three of its lower edges slightly raised, that is to say, a broad flat shallow channel is sunk along its under-surface, reserving a narrow margin at the long sides, which slide upon the shoulders cut in the case; and reserving also a small portion of the (outer) end. Four holes are drilled vertically through the bolt, coinciding exactly, when the bolt is thrown, with the holes in the tumbler block above. In this position the loose tumblers project downwards into the holes and prevent the bolt being moved either way—in fact locking it. It will be seen from the accompanying sketches that the tumbler block is free and rests upon the upper face of the bolt, thereby ensuring constant contact in spite of wear or shrinkage.

To prevent the complete withdrawal of the bolt when unlocked, and the consequent escape of the tumbler block which would then be free to drop out, a deep groove is sunk in the outer vertical side of the bolt about $1\frac{7}{8}''$ in length, and about centrally between the ends. A wooden peg of suitable diameter driven through from the outer end of the lock case into the bolt chamber until it projects inside sufficiently to engage with the groove, checks the traverse of the bolt in both directions. It is thus obvious that in putting the lock together the procedure would be, first, to insert the tumbler block with its loose pegs up into the hollow provided; then, to turn the case upside down so that the tumblers would retire; next, the bolt would be slid into its hole, and, finally, the peg (traverse check) would be driven through to make all secure. The lock would then be ready for fixing to door or lintel.

The key for this lock, undiscovered, but, no doubt, exactly corresponding to the specimens from the same site, Kha. ii. 0038; ix. 008 (see Pl. XVII), was a flat rectangular prism of wood having four projecting pins on its upper side, of size, projection, and disposition corresponding with the holes in the bolt. In use, the key would be thrust into the keyhole (the lower and narrower part of the transverse hole), and then lifted to bring the pins into the four holes in the bolt. Pressing them home, the tumblers would be lifted clear of the bolt which could then be withdrawn.

The principle of this lock is probably very ancient and was very widespread. Aristophanes, in *Thesmophoriazusae*, makes the women complain that their husbands carried the

patent Laconian key, described as having three teeth (see *Greek and Roman Life*, British Museum), which seems to suggest this type of lock; an assumption strengthened by the example of a Roman lock probably from Pompeii, and the collection of keys exhibited in the Gr. and Rom. Galleries of the British Museum. These are of metal, and the tumblers of the lock are not free but are attached to a flat spring to force them into position. A bronze lock of a modified pattern, ascribed to the Romans, has recently been discovered in Syria. In Egypt, wooden locks more closely resembling the Kha. example, and of recent make (nineteenth to twentieth century), are found. A similar but more roughly made lock comes from Bornu, W. Sudan, while the keys of the treasury of the Mahdi at Dongola attest the use of a similar lock there. All of these later examples quoted, however, have metal pins in the key and metal tumblers in the locks, and are less skilful in their construction than our example. We may at present regard the Kha. lock as embodying local modification due to its entirely wood construction, and to the mechanical and technical skill of the locksmith. It is interesting that a centre-bit has been used in drilling the holes. [F. H. A.]

Kha. vi. 1. a. Pieces of brown cloth, fine woollen, usual even texture, from cover of hole in floor. One fr. has three layers of cloth sewn together with red thread; another, two; the third, two (one finer than the other). Very soft and decayed. Gr. M. $6\frac{1}{2}''$.

Kha. vi. 3. b. Small flat object of plaited grass, the ends turned over on one side; square. Use? $1\frac{1}{16}''$ sq.; $\frac{1}{16}''$ to $\frac{3}{16}''$ thick.

Kha. vi. 5. Fr. of wooden panel. Flat on one side, convex on other. Faint traces of paint. No pattern distinguishable. One end broken and missing. Surface decayed. Soft and brittle. Length $7\frac{5}{8}''$; breadth $2\frac{1}{2}''$; thickness $\frac{1}{2}''$ to $\frac{1}{4}''$.

Kha. vi. 6. Wooden fig. of standing Buddha, both arms broken away at elbows. Prob. attitude of protection. Long upper robe of usual type prob. covering an under-robe which appears about ankles. The folds are conventional and well designed, and the manner of carving suggests a plaster (or clay) model, all folds being in thin well-defined ridges. The general character is that of high relief, not 'round'. The back is plain, excepting two holes for dowels. The head is carved at back to show hair, in transverse wavy lines. Uṣṇīṣa. Elongated ears. Features in slight relief. Face broken on R. side. Feet and front of R. leg broken away. Part of small base remains. Whole bears traces of pink colouring. Wood hard and well preserved. H. $6\frac{1}{2}''$; width $2''$; thick. $\frac{9}{16}''$ to $\frac{7}{8}''$. Pl. XIV.

Kha. vi. 8. Round wooden stick tapering towards ends, where small knobs are formed. Prob. weaver's instrument for tightening threads, or possibly handle of thong of fire-drill. Hard wood, smooth and well preserved. Cf. M.T. 001. $4''\times\frac{7}{8}''$ to $\frac{3}{8}''$.

Kha. vi. 17. Wooden pedestal for statuette. Base a solid block, front $1\frac{7}{8}''$ high $\times 3''$, whereon diaper pattern with dot centres lightly incised within plain frame bordered by sq. dots up sides and by fringe along bottom. On this the usual throne of inverted lotus petals, oval in plan, $2''$ across $\times \frac{1}{2}''$ high. From the back of this rose a vesica carved in the same block, $3\frac{3}{8}''$ high with a rayed border, the top pointed and inclined R.; the sides are split off to width of throne, leaving border at top only. Total h. $5\frac{3}{4}''$. Pl. XLVII.

Kha. vi. 18. Fr. of painted panel, lower end. Very roughly painted. On green lotus with white or pink centre a standing fig. of which only the lower portion of green robe, and white under-robe, are present. Below lotus a grey-blue band divided by a white line from a shaded pink band below that. Back rough as though split away from thicker piece. Wood rather soft. $7\frac{3}{8}''\times 1\frac{3}{8}''\times\frac{1}{4}''$.

Kha. vi. 001. Stucco relief. Part of vesica border. Ornament of upward-pointing chevrons, on receding planes, rippled to represent flames. Very low relief. Inversion of overlapping triangles makes fr. resemble mould, but modelling of flames is *in recto*. Substance very flimsy, red clay plentifully mixed with fibre. $5''\times 2\frac{1}{2}''\times\frac{1}{2}''$.

Kha. vii. 2. Fr. of carved and painted wooden head slightly larger than life-size, showing hair (blue), forehead, eye, and upper part of cheek. Prob. part of a fig. in the round. The cutting of the planes of the face is very conventional. The transition from plane of the forehead to that below eyebrow is quite sharp and abrupt. The upper eyelid drops straight for a distance and then turns slightly under. The curve is continued by the lower eyelid after a narrow interval, and the narrow slip of eyeball visible is shaped to a parallel curve slightly depressed from the eyelids. The whole surface has been carefully primed with finely ground white paint, and all the face gilded with leaf gold. The usual red and black contour lines were then applied. The hair is cut into shallow geometrical spirals, and the bright blue is painted over white priming. Wood hard. Most of the gold has disappeared. $7''\times 1\frac{3}{8}''\times\frac{11}{16}''$ max. Pl. XIV.

Kha. vii. 3. Wooden key of usual form. Six pegs arranged in pairs (three broken off). Upper edge split away. See above Kha. v. 006. $3\frac{1}{8}''\times\frac{15}{16}''$.

***Kha. vii. 001, 004** (joined). **Stucco relief fr.** of lotus wreath or fasces; prob. from edge of vesica. Cf. Kha. ii. 002, but with single plain broad fillet and three rows of small petals between (cf. Kha. ix. 0016). Sections painted red, blue, and green; plain ground of vesica blue. To inner edge was fixed border consisting of broad round rib wherefrom curve feather-fashion pointed lotus petals. White stucco. $6''\times 3\frac{1}{2}''$. Pl. XV.

Similar but slightly smaller: Kha. ix. 003, 004, 0017; cf. Kha. i. E. 0020.

Kha. vii. 002. Stucco relief fr., prob. of vesica border. Flame pattern in overlapping leaf-shaped masses. Very

low relief. Lower painted green; higher red. Hard white stucco. See Kha. ii. 0010; vii. 003. $2\frac{1}{2}'' \times 2\frac{1}{8}''$.

Kha. vii. 003. Stucco relief fr., prob. of vesica border. Flame pattern in overlapping leaf-shaped masses. Very low relief. Red ground. White stucco. Cf. Kha. ii. 0010; vii. 002. $3\frac{1}{2}'' \times 4\frac{1}{4}''$.

Kha. vii. 005. Stucco relief fr. Fine moulding consisting of string of bead orn., with row of single lotus petals, between each pair of which is a 'dart' (orig. pointed outer leaf of lotus). Strikingly recalls Gk. 'egg and tongue' moulding with which it is, perhaps, connected. Hard white stucco. Cf. Kha. i. E. 002; ix. 0010. $5\frac{5}{8}'' \times 4''$.

Kha. vii. 006. Stucco relief fr. of drapery, with series of curved horizontal folds, bounded on L. by broad vertical fold. Drapery red, inner side green. Hard white stucco. $2\frac{7}{8}'' \times 1\frac{3}{4}''$.

Kha. vii. 007. Stucco relief fr. Upper part of fig. of Gandharvī to L., with portion of vesica. Head and R. side of vesica lost. Colour remains on hair and drapery (black), vesica (green), and tunic (red). Cf. Kha. i. N. 002 (different mould). Hard white stucco. $4\frac{1}{2}'' \times 3\frac{1}{4}''$.

Kha. vii. 008. Stucco relief fr., prob. of vesica border. Flame pattern in overlapping leaf-shaped masses. Very low relief. Traces of pink on ground. Cf. Kha. ii. 0010; vii. 002. $4'' \times 3\frac{3}{4}'' \times \frac{1}{2}''$.

Kha. vii. 009. Stucco fr. in round. Upper part of R. hand. Fingers missing, and thumb broken at first joint. Plain single bracelet round wrist. At fracture marks of staff (?) grasped in hand. White plaster, hollow cast and partly clay-filled; hand and arm made separately. Gr. length $5''$; diam. at wrist $2\frac{1}{2}''$.

Kha. vii. 0010. Stucco miniature Stūpa, in soft white clay, roughly circular in plan. In elevation it consists of a base and a plinth surmounted by a faintly projecting cushion moulding, from which rises the flattened dome. As a finial, or tee, is a sq. projection supporting a hemisphere, convex aspect upwards; the transition from sq. to base of hemisphere is by a hollow chamfer. In about $\frac{1}{3}$ relief are placed round the plinth and resting on the base eight equidistant smaller Stūpas, each having a sq. base in two steps, above which seems to be a cushion-shaped drum, surmounted by a well-rounded dome and finial. Diam. of base $3\frac{1}{8}''$; h. $2\frac{3}{4}''$. Pl. IX.

Kha. viii. 001. Fr. of stucco mould with rounded top. Above, in centre, cinquefoil flower; below, foliage of lotus petals on either side of double bead stalk. Slightly smaller than Kha. ii. 0074 and with less prominent points between petals. Remaining, flower, top petal, and half of second and two beads on L.; one bead and fr. of top petal on R. Hard white stucco. $5\frac{1}{4}'' \times 3\frac{3}{4}''$.

Kha. viii. 002. Turned piece of wood, like Khora. 001; apparently finial. Sq. projecting dowel below. Bad condition. H. $10''$; diam. base $4\frac{1}{2}''$. Pl. XVII.

Kha. viii. 003. Wood fr., split from object like Kha. viii. 002, but smaller. Similar projecting dowel. H. $7''$; radius at base, *c.* $4''$.

Kha. viii. 004. Fr. of turned wooden baluster. Above (broken), ball moulding between beadings, umbrella moulding with cavetto leading to second ball moulding between beadings, and plain base-ring. Tenon below. Traces of red and creamy white paint. *C.* $\frac{2}{3}$ of circumference left. H. $7\frac{1}{2}''$; diam. $3\frac{1}{4}''$.

Kha. ix. 10. Painted panel broken away at one end and lower edge. Part broken off, now joined. *Obv.* Three seated female figs. each with black hair falling on shoulders. First fig. (R. p.) in white *kurta* with half-sleeves. L. arm flexed bringing closed hand to level of breast, but held slightly outward clear of body, knuckles down; R. hand resting in lap. Both hands defaced. Second fig. in dull green (?) garment, carries swathed infant; L. hand upraised to support head and shoulders; R. resting across infant's legs. Nimbus dark red. Third fig. in dark red garment, spotted with pattern composed of four white dots; holds an object resembling a circular tray. To L. p. of this fig. are traces of further painting. All figs. wear ear-rings. Background white with few red spots. All outlines black.

Rev. Upper part of three female figs. Long black hair. Each $\frac{3}{4}$ to R. p. Each wears a coronet and is nimbate. Faces show heightened colour on cheeks. Each fig. wears ear-rings. First fig., to L. p., light nimbus, wears white *kurta* with under-sleeves dark red. She has in front an object, possibly a loom, and holds in her R. hand either the end of the cloth beam, or more prob. the weaver's comb. On the background (white) near her L. shoulder, a spindle charged with yarn; and near the R. hand another. Near R. shoulder a ball of yarn in which seem to be stuck two spindles. Second fig., light nimbus, in red spotted with white, holds in L. hand a piece of white cloth, and in the R. hand a pair of shears upheld on level of shoulder. The white cloth seems to extend to R. p., past the next fig., and is possibly held at other end by a fourth person. Third fig. red nimbus, red garment; holds L. hand against breast. R. forearm seems to be lifted and suggests that R. hand may be caressing a fourth person whose head appears just at shoulder of third. The whole sand-encrusted and partially defaced. $10\frac{3}{4}'' \times 4\frac{7}{10}'' \times \frac{3}{8}''$. Pl. XIV.

Kha. ix. 11. a. Fr. of carved wood, prob. part of head-dress of statue. At base, oval lock of hair (?) with transverse markings; then narrow fillet from which rises tongue-pattern of very classical type. Above a curled lock of hair. Then broad plain fillet above which a floral rosette between two oval bead-bordered frames, in which jewels were prob. set. Low relief. $2\frac{5}{8}'' \times 1\frac{1}{8}''$.

Kha. ix. 11. b. Tumbler block of wooden lock. Inner end chamfered off; bored for key with five pegs, :·:; fits Kha. ix. 008. Wood hard and well preserved. Cf. Kha. v. 006. $2'' \times 1'' \times \frac{1}{2}''$.

Kha. ix. 13. Strip of wood, flat on one side but curving up from edge on the other. This edge and the two ends finished. Along inner edge split. $9\frac{5}{8}'' \times 1\frac{1}{8}'' \times \frac{5}{16}$ to $\frac{5}{8}''$.

Kha. ix. 14. Fr. of carved wood. Running border pattern. Chevron with half lotus in each triangular space. The band forming chevron composed of two fillets with pearls between. The whole pure Gandhāra style. Hard but cracked and abraded in parts. Length $7''$; width $1''$; thickness $\frac{9}{16}''$. Pl. XIV.

Kha. ix. 15. Stucco relief fr. of Buddha in protective pose. Same mould as Kha. ix. 005, but drapery and flesh overlaid with gold leaf; hair painted blue-black. White stucco. $2\frac{1}{4}'' \times 1\frac{5}{8}''$.

Kha. ix. 16. Carved wood fr. Cusped arch and spandrels of *mihrāb*. All lower part missing. Centre of arch pointed. Three foliations on each side. Arris of arch is hollow-chamfered with roughly carved beads in hollow. On face of arch, a plain flat moulding adjoining hollow chamfer, and continuous all round square-sided spandrels. Acanthus ornament in Gandhāra style fills spandrels. On R. p. side a small wedge-shaped tenon projects. Well preserved and fairly hard. H. remaining $1\frac{7}{8}''$ to $1\frac{3}{8}''$; width between outer sides of spandrel $7\frac{3}{4}''$; thickness $\frac{3}{4}''$. Pl. XLVII.

Kha. ix. 58. Fr. of painted panel, prob. R. p. of panel. The few remains visible seem to represent the R. arm of fig. wearing bracelets. White, outlined red. R. knee (?) visible. Very defaced. Wood hard. $4\frac{3}{4}'' \times \frac{7}{8}'' \times \frac{5}{16}''$.

Kha. ix. 58. a. Fr. of painted panel. Traces of paint. Red, white, and black. Design not decipherable. Hard, but broken and split. $8\frac{1}{2}'' \times 1'' \times \frac{5}{8}''$.

Kha. ix. 60. Fr. of painted panel, broken at three edges, and partially broken at the fourth. Painted on both sides, but badly defaced and unrecognizable. Wood perished and soft. $9\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{1}{2}''$.

Kha. ix. 001. Sandal-wood comb, with curved top and 46 teeth, some broken. Wood hard and sound. $4'' \times 2\frac{3}{8}''$.

Kha. ix. 002. Stucco relief fr. Head of Buddha, with nimbus; very hard white stucco. Same mould as Kha. ix. 15. White stucco. $1\frac{1}{2}'' \times 1\frac{1}{8}''$.

Kha. ix. 003. Stucco relief fr. of lotus wreath. Traces of blue on ground. Cf. Kha. vii. 001. White stucco. $2\frac{1}{8}'' \times 1\frac{1}{8}''$.

Kha. ix. 004. Stucco relief fr. of vesica border formed of imbricated lotus petals grouped into triple layers by dividing cinctures. Groups coloured resp. blue and red. Cf. Kha. vii. 001. $6''$ (along outer curve) $\times 1\frac{1}{8}''$. Pl. XVI.

Kha. ix. 005. Stucco relief fr. Head and body below breast of Buddha with halo; R. hand raised before breast in attitude of protection, L. arm by side. Same mould as Kha. ix. 15. White stucco. $2\frac{15}{16}'' \times 1\frac{1}{2}''$.

Kha. ix. 007. Wooden key of usual shape, painted dark chocolate colour. Eight ward-pegs, all lost; otherwise well preserved. See Kha. v. 006. $5\frac{1}{2}'' \times 1\frac{1}{2}''$.

Kha. ix. 008. Fine wooden key, painted dark chocolate colour. It had five ward-pegs, two of which are lost; originally the five pegs were differently placed, but these were sawn off and arrangement altered. Fits Kha. ix. 11. b. $5'' \times 1\frac{1}{4}''$. Pl. XVII.

Kha. ix. 009. Concave wooden disc carved as lotus flower, consisting of three rows of petals surrounding central seed-cushion. The latter prob. painted in light colour, the former blue (now turned blue-black). At lower edge of circumference is a peg, showing that object was a finial orn., perhaps part of head-dress. Flat work lacking detail. Diam. $4\frac{1}{4}''$. Pl. XLVII.

Kha. ix. 0010. Stucco relief fr. of bead and lotus petal border. Cf. Kha. vii. 005. Hard white stucco. $2\frac{1}{2}'' \times 1\frac{1}{8}''$.

Kha. ix. 0011. Bolt of wooden lock; oblong piece of wood $6\frac{1}{2}'' \times 2\frac{3}{8}'' \times \frac{11}{16}''$. At end six holes are bored, ·:·:, but first three plugged. In side is groove for traverse check-pin $3\frac{3}{4}''$ long $\times \frac{7}{16}''$ high $\times \frac{7}{16}''$ deep. Hard and well preserved. Cf. Kha. v. 006.

Kha. ix. 0012. Tumbler block of wooden lock, oblong. Inner end chamfered. Seven holes, :·:··; wood hard and well preserved. $2\frac{7}{8}'' \times 1\frac{1}{4}''$.

Kha. ix. 0013. Wooden key of usual form; five pegs (one broken) arranged four as rhombus with one beyond. Wood soft but fairly well preserved, except for deep saw (?) cut near handle. $3\frac{13}{16}'' \times \frac{15}{16}''$.

Kha. ix. 0014. Oblong wooden tablet, pierced $3\frac{1}{2}''$ from one end. No trace of writing on either face. Soft but fairly preserved. $14\frac{1}{2}'' \times 2\frac{1}{4}''$.

Kha. ix. 0015. Short rounded stick, thin at ends, broad in middle where two notches are cut. A somewhat similar object is used in India in fixing pots to rope of well-wheel. Hard and well preserved. Length $3\frac{7}{8}'' \times \frac{7}{8}'' \times \frac{11}{16}''$. Tapering at each end to $\frac{3}{8}''$.

Kha. ix. 0016. Stucco relief fr. of lotus wreath. Sections painted alternately red and green. Small portion of blue field of vesica remains. Plain double fillets with three rows of small petals between. Cf. Kha. ii. 002. White stucco. $4'' \times 1\frac{1}{2}''$.

Kha. ix. 0017. Stucco relief fr. of lotus wreath. One section green, portion of field sky-blue. Cf. Kha. vii. 001. White stucco. $3'' \times 1\frac{1}{4}''$.

Kha. ix. 0018. Fr. of pottery, dull red clay glazed inside and out with good dark green glaze, though somewhat unevenly spread. $2\frac{1}{8}'' \times 2\frac{5}{8}''$.

Kha. ix. 0020. Fr. of painted panel, intact at lower edge; all others broken. *Obv.* Lower portion, on a deep red ground divided from upper part by thin white line, some object of pink colour having contours in red. Upper portion contains a deep red band, $\frac{3}{4}''$ broad, sweeping in an elliptical curve from above downwards towards the L. p.; edged on outer side by white line, which helps to divide it from orange-red forming background. This

band is the border of a vesica the field of which is orange red.

Rev. Traces of paint. A small fig. ¾ to L. p., wearing a kind of dark brown caleçon, stands on a cloud (?) and bends slightly over. There are traces of long black hair, and a small halo. To R. p. of head curved border of large vesica, pattern being beads between pairs of lines, all outlined in black. Background to small fig. is yellow ochre. Much defaced. Wood hard and well preserved. 6⅜" × 1⅜" × ⅜".

Kha. ix. 0021. Truncated hollow horn. The point being removed, a long wooden stopper is inserted. Traces of black paint on upper end of stopper. Lower end of horn also open, but may originally have been closed to form a kind of flask. Surface much flaked and very soft. Stopper soft. Length of horn 3⅜"; diam. base 1$\frac{13}{16}$"; top ⅞"; length of stopper 3¼", of which ⅞" projects outside.

Kha. ix. 0022. Edge of cup of green glass. Edge rounded. Inside smooth. Outside ground into rudely lozenge-shaped, slightly concave facets. H. 2⅛"; diam. at edge *c.* 3"; thickness ¼" to ⅛".

Kha. ix. 0023. Wooden disc with intaglio design on each side. *Obv.* Open lotus flower having eight main petals deeply ribbed; between show eight pointed outer leaves; border of dots round. *Rev.* Man riding on camel. L. R. hand raised holding bridle; L. hand with knobbed stick. Much worn. Cf. Coptic cake-stamps. *Cat. Musée du Caire, Koptische Kunst,* p. 139. Diam. 4"; thickness 1". Pl. XLVII.

Kha. ix. 0024. Fr. of felt, dull salmon-coloured, ragged and much eaten, oversewn with buff thread along two edges. Also three small frs. of soft red felt. Larger felt fabric, Gr. M. 5½".

Kha. ix. 0025. Turned piece of wood with plain mouldings (baluster?). Dowel at one end; cut off diagonally at other. 13" × 2¾".

Kha. ix. 0026. Upright of wooden baluster (?), with turned mouldings. At either end, narrow dowel projects across whole diam. 1′ 9½" × 2¾".

Kha. ix. 0027. Half of wooden object similar to Kha. viii. 002. Shows traces of blue paint. Finial to top of model Stūpa (?). H. 8½"; diam. 4"; dowel 8" × 1¼" × 1". Pl. XVII.

Kha. ix. 0028. Small ball of fine linen thread, with some loose thread. Diam. *c.* 1½".

Kha. ix. 0029. Plaited hempen string, prob. from shoe. 11" long.

Kha. ix. 0030. Circular mat of coarse linen material, two thicknesses with felt between; the whole carefully bound round with a narrow strip of red linen fabric; all edges turned in and neatly finished. Diam. 3¼".

Kha. ix. 0031. Toe of wooden boot-last. Cf. *Anc. Khotan*, ii. Pl. LXXIII, N. xx. 04. 5½" × 3" × 1".

Kha. ix. 0032. Wooden boot-last. Cf. *Anc. Khotan*, ii. Pl. LXXIII, N. xx. 04. Heel-piece made separately and lined with cloth. 10½" × 4" × 3⅜".

Kha. ix. 0033. Fr. of painted wood, split off larger piece. Very rough. Part of one edge chamfered. Near another edge, a roughly cut incised line. Traces of paint on one side only. Subject indistinguishable. Much injured. Wood soft. 10¾" × 2¼" × ¾".

Kha. x. 1. Fr. of wooden panel, painted on both sides Less than half of original remains, the break being vertical. *Obv.* Against a vesica, male fig. seated cross-legged on lotus (?). Head to front. Flesh colour outlined dark red. Hair, indicated on forehead and eyebrow black. High Persian hat. R. arm hangs almost straight down, behind R. knee. The hand has lost all detail. Arm and body (where visible) clothed in vermilion, close-fitting *kurta,* ornamented with pattern of white dots forming diagonal lines, between alternate rows being a kind of Triśūla mark (UU) in black. A stole with no visible colour, but outlined in red, hangs from behind hat and round arm to front. Most of colour has disappeared.

Rev. A fig. probably in same position as that on *Obv.* and with similar head-dress and stole. The *kurta,* however, has long bell-mouthed sleeves. It is covered with a spot pattern formed by four white dots grouped flower-wise. A broad band of dark red with diagonal lines of dots forms the cuff. Hand almost invisible but seems to be in same stiff pose as that of *Obv.* Stole is yellow. *Kurta* perhaps pale green with white spot pattern. Wood fairly hard, but surface abraded and sand-encrusted. Length 8"; width 2⅛"; thickness ⅜".

Kha. xi. 001. Wooden spoon or scoop. Bowl flat on upper side, slightly convex on under; pear-shape. Small portion of handle remaining turns up at angle of about 40° with horizontal plane of bowl. Soft and perished. Length of bowl 2½"; length over all 3½"; width of bowl 1⅜"; tapering to handle ⅝"; thick. of bowl ¼".

Section IV.—MINOR RUINS NEAR KHĀDALIK

Kighillik 'Tati'.

Already while at Khotan I had heard from Mullah Khwāja the names of certain smaller sites which he had discovered in the vicinity of Khādalik, and to these I paid rapid visits while the work at the latter ruins could safely be left to the supervision of Naik Rām Singh and Chiang. The nearest of them, which Mullah Khwāja knew by the significant name of *Kighillik*, the 'dung-heap',

lay half a mile to the east and showed only traces of a few rush-and-plaster walls marking the position of stables and cattle-sheds. The ground immediately adjoining, being protected by layers of horse- and sheep-dung, had retained its original level, while the rest of the 'Tati', measuring altogether about a hundred yards in diameter, had been eroded by the winds to a depth of six to ten feet, as shown by a characteristic group of small 'witnesses' seen in Fig. 43.

Site of *Balawaste*.

Of more interest was the small site about one and a half miles due north of Khādalik which Mullah Khwāja called *Balawaste*, and which on examination proved identical with one of the small 'Tatis' I had passed on March 24, 1901, and then heard collectively designated by my shepherd guides as *Ak-tāz*.[1] The ground passed *en route* was covered with closely packed tamarisk-cones, but showed here and there small eroded patches with witnesses six to ten feet in height. Balawaste itself was such a patch of open ground, measuring about two hundred and sixty yards in diameter and showing old pottery débris at several points. Near its middle I found what, owing to the erosion effected around, looked like a small plateau, bearing the scanty remains of a roughly built dwelling. Its walls, constructed of vertically-placed rush bundles with a thick outer coating of mud plaster, formed an oblong of about seventy by sixty feet; within, a series of small rooms could be traced. The layer of sand covering the floor was only a foot or two deep, and apart from some rags (Bal. 007. a–c), including a small piece of silk with a printed colour pattern, no finds resulted from the clearing.

Wooden records in Chinese and Brāhmī script.

About eight yards to the west of this dwelling and partly covered by the foot of a sand-cone was a smaller ruin of similar construction showing two rooms flanked by sheds which manifestly had served at one time as sheep-pens. Mullah Khwāja declared that it was in one of these rooms he had found the three well-preserved Chinese documents written on wooden tablets, about one foot long and one inch broad, which I had acquired through Badruddīn Khān at Khotan and which are now published and translated by M. Chavannes in his volume of the present Report.[2] It will be seen there that both in contents and outward appearance these documents agree closely with the wooden records I subsequently excavated at the site of Mazār-toghrak to the south-east of Domoko.[3] In any case the records clearly emanated from some petty administrative office. A line of cursive Brāhmī writing appears below the Chinese characters on one of the Balawaste tablets and thus shows that the issuing office must have been of a local character and was not confined merely to a Chinese garrison. Though the room in question was now filled by sand to a height of some five feet the complete clearing effected yielded no find except the tiny fragment of a wooden tablet showing remains of Chinese writing on one side and of cursive Brāhmī on the other. This, however, served to confirm the accuracy of Mullah Khwāja's statement as to the origin of his tablets. Not far from this structure there was found on eroded ground a copper coin badly effaced in which Mr. Allan believes he can recognize a late *Wu-shu* piece of the Liang dynasty.

'Witnesses' showing erosion.

A close examination of this ground showed that the pottery covered 'witnesses' rose here to heights of ten to twelve feet. Yet their flat tops generally remained two or three feet below the original ground level as indicated by the ruin just mentioned, this difference plainly marking the progress made by erosion since the disappearance of the structural remains to which these 'witnesses' first owed their survival. Both here and on my subsequent visits to other small ruined sites south there were abundant opportunities for instructive observations on the physical changes which had come over this desert area to the east of the Domoko stream, once evidently occupied by numerous villages. Again and again I noted how the patches of open ground, probably marking the positions where small agricultural settlements had clustered, were being broken up and scooped out

[1] See *Ancient Khotan*, i. pp. 453 sq.

[2] See Chavannes, *Documents*, p. 219; Pl. XXXVII, Nos. 981–3.

[3] See p. 205.

by the erosive force of wind and driven 'sand', i. e. disintegrated loess. At all such points small terraces of fairly hard loess soil, rising to heights of six to thirteen feet above the eroded depressions close by, served as witnesses approximately indicating the ancient level of the ground. Thin layers of pottery fragments on their surface helped to explain why these terraces had withstood the unceasing attack of wind-erosion. The progress of the erosion could be observed on the sides of the terraces, which everywhere showed the effects of under-cutting as plainly as a river-bank which is being washed out by the setting current. What remains of modest dwellings I could still trace on such ground, as at *Kushuk-aste* about a mile to the west of Khādalik, or at *Kök-jigda*, another small 'Tati' about two miles south, consisted of low rush walls or fences which by their very weakness offered less scope to the grinding force of driven sand, and on the contrary were apt to catch and retain it as a cover.

Formation of tamarisk-cones.

The same phenomenon was illustrated by the structure of the closely packed sand-cones which covered most of the ground and encircled all open areas. Their height usually varied from about twelve to fifteen feet above the original ground level; but in places I observed cones rising twenty-five feet and more. Tangled masses of tamarisk scrub, usually dead at the foot but still flourishing on the top, invariably covered these hillocks. There could be no doubt that the latter owed their origin to the tamarisk bushes, which had first overrun the fields when cultivation slackened and ceased, and had then served to catch and collect the drift sand passing over the ground with the winds of the spring and summer. The low tamarisk thickets I saw spreading over the fields of 'Old Domoko' and Ponak, abandoned during the nineteenth century,[4] fully illustrate this initial stage of the process. The struggle for light and air, which the tamarisk bushes, once rooted on level ground, have to carry on against the sand steadily accumulating around them, forces their head branches to rise ever higher and higher. The sand, the smothering embrace of which they try to escape, naturally follows this rise, and the cones formed by it thus grow correspondingly in size and height.

Rate of growth of tamarisk-cones.

The structural process here briefly indicated must have been essentially the same wherever the great desert of the Tārīm Basin is edged by this characteristic zone of tamarisk-cones. But the rate of growth may have varied considerably according to local conditions connected with climate, sub-soil water, prevailing winds, and the like. Hence it was of considerable interest that an archaeological observation enabled me to determine with quasi-chronological exactness the time which this building-up process here took. At the edge of a small area of open eroded ground about half-way between Khādalik and Balawaste my guides showed me a few fragments of small relievos in hard white stucco emerging from the slope of eroded loess soil immediately at the foot of a big tamarisk-covered sand-cone. Such slight digging as the masses of sliding sand permitted us to make into the side of the hillock, brought to light more stucco fragments which once formed part of the relievo decoration of some big halo in a Buddhist shrine. That this dated from the same period as the temples of Khādalik was made certain by the style and technique of these fragments of which specimens will be found described in the list below.

Relievos at foot of tamarisk-cone.

The abraded condition of the relievo fragments representing small standing Buddhas and floral borders left no doubt that they had been exposed for a long time to corrosion by driven sand, until the expansion of a neighbouring sand-cone came to provide protection for these humble remnants of a shrine otherwise completely destroyed. The level on which they were found was about three feet higher than the top of the nearest 'witnesses', while the witnesses themselves rose six to ten feet above the bottom of the eroded depressions adjoining them. This difference of about three feet agrees with that noted at Balawaste and clearly represents the progress made by erosion since the relievo

[4] Cf. *Ancient Khotan*, i. pp. 458 sq.; *Desert Cathay*, i. p. 238.

fragments came to be buried beneath the slope of the sand-cone. The cone rose now fully sixteen feet above the level indicated by the débris. It is reasonable to assume that the origin of the sand-cone goes back to the very period, about the close of the eighth century A. D., when these settlements about Khādalik were deserted. The rate of growth thus deduced subsequently received striking confirmation by the exactly corresponding observation made at the Buddhist temple, F. XII, at the ruined site of Farhād Bēg-yailaki about nine miles to the north-west of Khādalik (see Map No. 31). This temple had originally been built on the top of an old tamarisk-cone which has grown just eighteen feet above the height it showed at the time when the shrine was abandoned, probably about the close of the eighth century A. D.[5]

Site of *Kök-jigda.*

Very instructive, too, was the visit which on September 30 I paid to some minor remains south of Khādalik. The site of *Kök-jigda*, thus called from an old and still living Jigda or Eleagnus-tree, proved to be about a mile and a half distant to the south-east. In the middle of an open and slightly eroded area, measuring about 200 yards from east to west and about 120 yards across at its broadest, rose a low mound covered with broken pieces of coarse wall plaster, reed wattle, stable refuse, and other marks of old occupation. The remains extended over a space about thirty yards in diameter. A trial trench failed to show the exact position of walls, but revealed the plastered flooring at a depth of nearly four feet and proved that the wattled walls had been constructed with reeds fixed horizontally as in the shrines and better-class dwellings of Dandān-oilik. Since this system of wattle construction is never met with in remains of the Muhammadan period, it seems safe to assume that this site, too, was abandoned about the same time as Khādalik.

Remains at *Darabzan-dong.*

More positive proof of such simultaneous abandonment came to light at *Darabzan-dong*, as Mullah Khwāja called the southernmost of his small sites. I found it to lie due south at a direct distance of two and a half miles from Khādalik and close to a winding reed-filled depression which clearly marked an earlier course of the Domoko stream. Near the left bank of this, and just south of a track connecting the northernmost part of Domoko with the oasis of Achma, there rose a small plateau which presented the characteristic features of a 'witness', as compared with the wind-eroded ground immediately adjoining. Its northern portion was higher, rising about twenty feet above the depression, and measured about two hundred feet from east to west, and a hundred and ten feet at its broadest. Its top revealed no structural remains; but the numerous cuttings made into it, evidently by 'treasure-seekers', and the layers of straw and farmyard refuse which cropped out on the edges, were evidence that these had once existed.

Remains of ruined shrine.

At its south-eastern end this plateau was adjoined by a terrace of which the top, about seven feet lower and thirty-four feet in diameter, still retained a thin layer of débris less than a foot in height. Here a few sand-worn pieces of plaster attracted my attention, and on clearing the ground we came upon a number of much-decayed pieces of stucco evidently from a frescoed temple wall. One of the fragments (Dar. 004 in list below) showed a small Buddha head painted in the style of the Khādalik frescoes. On two other fragments of stuccoed wall surface a few characters of what looked like very cursive Brāhmī script could just be made out. Among sculptural remains were two stucco heads modelled in high relief, of which one, Dar. 008, still retaining plentiful remains of paint, is reproduced in Plate CXXXVIII. These heads as well as the fragment of a lotus-petal vesica border (Dar. 003) showed close resemblance in style to the work of the Khādalik shrines. A painted panel and the portion of a Brāhmī Pōthī containing at least twenty leaves, which also turned up from under the scanty cover of sand, had unfortunately suffered badly by rotting. Yet they, too, helped towards the approximate dating of the ruin.

[5] For details about the Farhād Bēg-yailaki Site and this interesting ruin, see below.

Insignificant in themselves, the finds sufficed to establish the important chronological fact that this site, too, though within less than a mile of the stream of Domoko and little more than that distance from the eastern edge of the actual oasis, was abandoned about the same period as Khādalik and distant Dandān-oilik. The discovery had its own special interest, since it strengthened my doubts as to whether this simultaneous abandonment of settlements, dependent on the same water-supply and yet widely separated in distances, could adequately be accounted for by progressive desiccation alone.

Limitation of explorations around Khādalik.

I had little doubt at the time that the area of sandy jungle stretching east and north of the Domoko Yār with its maze of tamarisk-covered sand-cones was hiding more remains of early occupation than Mullah Khwāja was able or willing to show me during my stay at Khādalik. But as it was, it required very great and almost continuous exertions to complete my explorations within the limited time at my disposal. In the end I felt doubly glad at having spared these ten days of unremitting labour for Khādalik; for when, in March, 1908, I returned to this tract, I found that the area containing the ruined shrines had, after long centuries, again been brought under irrigation from the Domoko stream—and their destruction completed.

OBJECTS FOUND AT BALAWASTE

Bal. 001. Stucco relief fr. of standing Buddha from breast to ankles. L. hand by side. White stucco, much sand-worn. $2\frac{7}{8}'' \times 1\frac{5}{8}''$.

Bal. 002. Stucco relief fr. Head of a Buddha with nimbus. White stucco, much sand-worn. $1\frac{7}{8}'' \times 1\frac{1}{2}''$.

Bal. 003. Stucco relief fr. of standing Buddha. Broken across neck and hips. White stucco, much sand-worn. $2\frac{1}{8}'' \times 2\frac{1}{8}'' \times \frac{9}{16}''$.

Bal. 004. Stucco relief fr. of lotus wreath. Traces of red and blue. Cf. Kha. i. W. 008. $2'' \times 1\frac{1}{2}'' \times \frac{7}{8}''$.

Bal. 005. Stucco relief fr. showing L. arm (bent and upraised) of fig. Below, fold of drapery. Outside, part of border of large petals. Fig. probably rising from lotus; cf. *Anc. Khotan*, ii. Pl. LVI, D.T. 02 and D. xii. 5. Traces of red. White stucco, much sand-worn. $2\frac{1}{8}'' \times 2''$.

Bal. 006. Stucco relief fr. Lower part of standing Buddha. Much sand-worn. Traces of red and blue on drapery to R. White stucco. $2\frac{1}{2}'' \times 2\frac{1}{8}''$.

Bal. 007. a–c. Fabrics. (*a*) Fr. of yellow felt. Gr. M. $3''$. (*b*) Piece of cord made of twisted thread. Length $5''$. (*c*) Piece of blue-green silk with cruciform pattern printed in buff. $2\frac{1}{4}'' \times 1\frac{1}{2}''$. Pl. CXXIII.

OBJECT FOUND AT KUSHUK-ASTE SITE

Kushuk-aste. 001. Fr. of blown glass, transparent dark green. $\frac{5}{8}'' \times \frac{3}{8}'' \times \frac{1}{8}''$

OBJECTS EXCAVATED AT DARABZAN-DONG RUIN

Dar. 001. Painted wooden panel showing seated divinity accompanied by Śakti seated on his R. thigh and proffering a small *katōra* with her R. hand. Divinity, dark grey, Śakti, pale pink. Very defaced and almost illegible. $6\frac{5}{8}'' \times 3\frac{1}{8}'' \times \frac{1}{2}''$.

Dar. 002. a–d. Four frs. of plaster of Paris stucco, showing on back marks of straws in clay stucco which they faced. Traces of irregular zigzag pattern in pink, light red, dark grey, and purple. Gr. M. $5''$; thickness $\frac{3}{16}''$.

Dar. 003. Stucco relief fr. of vesica border. Cf. Kha. i. 0013. Narrow curved lotus petals springing from bead edging. White stucco. $3'' \times 2'' \times \frac{5}{8}''$.

Dar. 004. Fresco fr. in style of Kha. frescoes, showing head of Buddha in front of pointed halo, the edges of which are notched with black to represent acanthus. Flesh buff, outline dark red, hair black, as also eyebrows, pupils, and upper curve of eyes. Background white. Halo bordered by three bands, light red, pale green, and light red. Gr. M. $4\frac{1}{4}''$.

Dar. 005. a, b. Two frs. of fresco showing, (*a*) four characters, and (*b*) part of one character, in black on white ground. (*b*) also shows part of light red border. Cursive Brāhmī (?) script. See Appendix F. (*a*) $4'' \times 3\frac{1}{2}''$; (*b*) $1\frac{1}{2}'' \times 1\frac{1}{4}''$.

Dar. 006. Toe of string shoe. Plaited sole; uppers of separate cords with bound-over edge. Cf. M.T. i. 13. $4'' \times 3\frac{1}{4}''$.

Dar. 007. Wooden strip, off end of cantilever. Above, triple moulding of receding planes (like Ionic architrave); below, end (L. p.) of modillion curving into spiral volute carved in relief. Rotten. Traces of white ground for paint. $8\frac{3}{4}'' \times 3\frac{3}{4}''$.

Dar. 008. Stucco relief fr., head. L. ear, part of L. eye, and points of nose and chin knocked off; also upper part of head-dress (which was that of Mi. xi. 002). Plentiful remains of paint. Flesh brown, head-dress yellow and red. Face and nose outlined by red line. Lips and line marking upper end of eyelids, red. Eyelashes, pupils, and eyebrows, black; hair black. Long ears with ear-rings, broken. Bad example of type of head common in Mi. stucco reliefs (e. g. Mi. xi. 002). Clay over clay and fibre backing; hollow to take core. Chin to crown $5\frac{1}{2}''$. Pl. CXXXVIII.

Dar. 009. Stucco relief fr. Head. Both ears broken, and hair (applied after) gone but for a trace on forehead. Hole at each corner of mouth. Long narrow face with bulging eyes and low forehead. Nose unusually long. Tilaka. No trace of paint. Poor modelling. Position for hair marked by shallow incised line. Surface of white plaster on clay backing. Chin to crown $5''$.

MISCELLANEOUS OBJECTS BROUGHT FROM SITES ABOUT DOMOKO, SOME PROBABLY FROM KHĀDALIK

Do. 01. Stucco relief fr. of standing Buddha; broken off at waist and ankles. Trace of dark paint round edge of skirt, and of red paint between hip and L. arm. White stucco. $2\frac{7}{8}'' \times 2\frac{1}{8}''$.

Do. 02. Stucco relief fr. Head, breast, and R. shoulder of fig. of Buddha. Plentiful traces of colour. Black hair. Traces of gilding on face, and upraised R. hand. Robe red. Behind R. ear touch of green, behind L. ear touch of light red, showing colour of lost nimbus. White stucco. Much worn. $4'' \times 2\frac{1}{8}''$.

Do. 03. Stucco relief fr. Head of Buddha, with fr. of nimbus showing traces of red. White stucco, worn. $1\frac{1}{2}'' \times 1\frac{1}{4}''$.

Do. 04. Stucco relief fr. Flame pattern; two bands, inner pink, outer green. Cf. Kha. i. C. 0011. White plaster. $1\frac{13}{16}'' \times \frac{3}{4}''$.

Do. 05. Fr. of plaster stucco, gilded, on backing of woven fabric (cotton), $2\frac{1}{2}'' \times 1\frac{3}{8}''$. Gr. M. of stucco $1\frac{5}{16}''$.

Do. 06. Edge of wooden panel painted on both sides. *Obv.* On dull red ground a standing fig. Flesh light brown outlined in dark red-brown. Hair black. Less than half of face is left. Across shoulder a stole, light brown, with brown markings, falls over red dress. At waist, black girdle. Below, much rubbed and indistinguishable. *Rev.* Red ground, on which design in light blue-grey with details in black. Possibly part of a standing fig. with small fig. seated at its feet. $5\frac{1}{4}'' \times \frac{5}{8}'' \times \frac{3}{8}''$.

Do. 001. Specimen of hair, very coarse buff and brown hair (?) mixed. None more than 1″ long.

Do. 002. Fr. of fresco, showing pattern in white on chocolate ground. $\frac{13}{16}'' \times \frac{1}{2}''$.

Do. 003. Sq. seal of yellow steatite, with rounded pierced back. Design geometric; for almost similar design cf. Yo. 0089. $\frac{5}{8}''$ sq. $\times \frac{1}{2}''$.

Do. 004. Seal of yellow steatite. Upper part bevelled away to form perforated loop-handle. Bears a few cursive characters which distantly suggest Brāhmī. Inscription reads on stone, reversed in impression. $\frac{1}{2}''$ sq. $\times \frac{3}{8}''$.

Do. 005. End of hollow bronze rod made of twisted wire. Flat strip bound round end. Condition good. Length $\frac{3}{4}''$; diam. $\frac{1}{8}''$ to $\frac{3}{16}''$ (end).

Do. 006. Light brown paste, end of hollow orn. with opaque parallel waved white lines. Elongated shape. $\frac{1}{2}'' \times \frac{5}{16}''$ to $\frac{1}{8}''$.

Do. 007. Bronze disc, set on pin (broken). Part of orn. of a brooch (?). Hollowed, and once prob. inlaid. Diam. $\frac{1}{4}''$.

Do. 008. Fr. of bronze pin, head of which was pierced. Broken at hole and lower down. $\frac{3}{4}'' \times \frac{1}{16}''$.

Do. 009. Bronze miniature vessel, resembling model of Tib. teapot. Solid. $\frac{7}{16}'' \times \frac{3}{8}''$.

Do. 0010. Cylindrical paste bead, with channelled sides; buff. $\frac{3}{8}'' \times \frac{3}{8}''$.

Do. 0011. Sq. bar of glass paste, opaque brown with white zigzag markings. End pierced. Cf. Do. 006. $\frac{7}{16}'' \times \frac{1}{8}'' \times \frac{1}{8}''$.

SECTION V.—THE DOMOKO-YĀR AND THE REMAINS AT MAZĀR-TOGHRAK

Visit to Domoko Oasis.

Leaving Khādalik on the morning of October 3 I proceeded south of the main Domoko Oasis in order to search for a spot where, according to an aged cultivator's statement reported by Mullah Khwāja, 'old papers' had been found some forty years before by men engaged in collecting saltpetre for the supply of Yākūb Bēg's powder factories. They were said to have been thrown away again on the spot as useless rubbish. The clue seemed vague, indeed, especially as Mullah Khwāja knew nothing of ruins there. But the march to the alleged site gave me the desired opportunity of visiting

the main oasis of Domoko and investigating the peculiar irrigation conditions which have played an important part in its modern history. As the changes produced by them offer distinct interest for the archaeological student no less than for the geographer, the observations already set forth in my personal narrative may justly here also receive a record.[1]

Shift of cultivation from 'Old Domoko'.

When in March, 1901, I first touched the northern edge of the Domoko tract I was struck at once by the shifting which its irrigated area had undergone within living memory. In the zone overrun by desert vegetation and light drift-sand, to the north-west of the outlying colony of Malak-ālagan, I had then come across the abandoned fields and dwellings of an extensive village site known as 'Old Domoko'.[2] From there, according to the villagers' uniform statements, the area of cultivation had been transferred to its present position, about nine miles farther south, near the Khotan-Keriya high road, only some sixty years earlier. The gradually increasing difficulty of conducting the irrigation water sufficiently far was declared to have been the cause of the migration. Whatever was the origin of that difficulty, it was clear that the migration had served to bring the cultivated area of Domoko nearer to the springs in which the water of the mountain streams about Nūra and Tört-Imām comes to the surface again at the foot of the great glacis of piedmont gravel southwards. Upon these the oasis entirely depends for irrigation before the summer floods bring down the *ak-su* ('white water') of the melting glaciers and high snow beds.

Prof. Huntington's investigation.

It was thus tempting to connect this transference with that general process of desiccation or gradual drying up of the climate which, as is becoming clear to competent observers, has affected the physical conditions of Central Asia very extensively during the historical period. No one has done more to investigate this great physical change than Professor Ellsworth Huntington who has studied its problems over widely distant parts of Asia as well as in Southern Europe and on the American continent. With this object in view also he devoted several weeks in the autumn of 1905 to the systematic examination of the physiography of the plain between the Khotan and Keriya Rivers, and did not fail to call special attention in his fascinating volume, *The Pulse of Asia*, to this well-authenticated change in the area of cultivation.[3] Shrinkage in the amount of available water-supply was accepted by him as the obvious explanation.

Tradition of shifts of cultivation.

Yet there were not wanting indications of special local conditions which might have influenced the change. I remembered what a tradition heard on the occasion of my first visit in 1901 asserted about such transferences of the cultivated land, backwards and forwards, having occurred repeatedly in the case of Domoko. The opening of the Malak-ālagan colony, fully six miles to the north of the centre of the present main oasis and dating back only to about 1890, looked curiously like an illustration of the reverse movement northward having already set in. When stopping there on my way to Khādalik, I learned that the number of settlers at Malak-ālagan had increased considerably since 1901, and that its irrigation was now being extended even towards the long-abandoned fields of Old Domoko. But it was only when marching from Khādalik south to Domoko, and to the alleged old site near Mazār-toghrak, that I obtained a clear idea of the peculiar conditions of water-supply to which this interesting colony owed its origin and Old Domoko its chance of resumed cultivation.

Earlier bed of Domoko stream.

We first struck the Domoko-yār to the west of Khādalik near the point where its stream is dammed up in order to feed the Malak-ālagan Canal (Map No. 31). Then we followed the broad reed-covered depression upwards until the eastern edge of the present oasis was reached near the hamlet of Ak-kol. By making a short détour eastwards I was shown, at a distance of less than

[1] Cf. *Desert Cathay*, i. pp. 250 sqq.

[2] For a detailed account of this 'site', very instructive in spite of its recent character, see *Ancient Khotan*, i. pp. 458 sq.; cf. also Map No. 31.

[3] See Huntington, *Pulse of Asia*, i. pp. 174 sqq.

a mile, the badly decayed and almost imperceptible remains of some dwellings by the side of a deep-cut channel, known as *Chigillik-yār*. The latter evidently represents another bed of the Domoko stream, and still receives water during the winter when there is no irrigation demand to absorb it. It was manifestly a continuation of this old bed which I had traced near Darabzan-dong, and which probably had once carried water to Khādalik also.

Observations at Domoko Oasis.

From this dreary waste of scrub-covered sand-hills the change to the oasis was striking. The ground passed through for the next few miles on our way south was all *yangi-kent* or 'new land', having been brought under cultivation only about twenty-five years before. Many old sand-cones, once, no doubt, covered with tamarisks but now completely bared for fuel, still rose above the levelled fields, attesting recent reclamation. They had here often been used as building-ground for the scattered homesteads. On the other hand, in the older part of the oasis, whence the transferences had taken place about the forties of the last century, and which we skirted by the Shākul Canal on our way to the high road, I failed entirely to see them. All the cultivated ground south of the road was declared to be 'new land', gradually added to the oasis during the last thirty years.[4] I saw clear signs of this extension still proceeding as I rode along the head portion of the canal southwards to the great *tugh* or dyke by which the waters of the Domoko stream are safeguarded for the main oasis (see Map No. 32).

Dam across Domoko-yār.

When we reached this, about two miles from the Khotan-Keriya road, I saw before me quite an imposing piece of engineering, as things go in the Tārīm Basin. A dam nearly 200 yards long and of very solid construction closed the head of the Domoko-yār, rising more than thirty feet above its marshy bottom. The whole dyke consisted of stamped earth with thick layers of brushwood at short intervals. Its top was broad enough for a wide road to pass. Thick rows of willow-trees strengthened its south side towards a large sheet of water, formed by the Domoko stream close to the point where the canals of the oasis absorb its water. The depression holding the stream here looked broad and shallow. Quite different was the appearance of the Domoko-yār which formed the natural continuation of this stream-bed northward. Here it presented itself as a well-marked winding ravine, deeply cut into the loess soil between steep banks sixty to eighty feet in height. In the basin forming its head the presence of ample springs was marked by thick growths of reeds and coarse grass, though no course of flowing water was visible from above.

Reason of constructing Domoko dam.

I had heard of this dam while at Khādalik; but only on the spot could I realize its significance for the history of the oasis past and present. According to my local informants an exceptionally big summer flood had come down seventeen years before my visit in the bed of the Domoko stream, and had converted a shallow channel generally dry into the broad and deep-cut ravine now extending towards Malak-ālagan. A serious risk thus arose of the whole water-supply of Domoko being drawn off into the newly formed deep 'Yār' where the difference of level would have rendered it useless for the irrigation of the extant oasis. For a year the service of the canals watering the fields of Domoko suffered seriously from the tendency of the stream to be absorbed in the new bed, and the alarmed villagers were preparing to move elsewhere. Then under the orders of the Keriya Amban, whom the prospective abandonment of the oasis threatened with loss of revenue, the local Bēgs set about by a joint effort to erect the extant dam. About fifteen hundred labourers, drawn from all the neighbouring oases, from Chīra to Keriya, were said to have been kept at work on it for about two months. Considering how widely scattered and scanty was the population, and how divergent the interests of the several oases, as far as irrigation is concerned, the collection and simultaneous employment of so much labour, all *corvée*, of course, must have been a serious under-

[4] In Map No. 31 the cultivation of Domoko is by an error of reproduction made to appear as stopping short of the southern edge of the sheet. In reality it continues a little to south of 36° 59′, as seen in Map No. 32.

taking. In addition, the maintenance of the dam in effective condition to face the summer floods necessitated the annual employment on repairs of large contingents of men, considerably in excess of the number which Domoko alone could furnish.

Water gained for Malak-ālagan colony.

By these efforts Domoko was assured its former supply of *kara-su* ('black water') or water from springs, which everywhere in these oases along the southern edge of the desert is indispensable for irrigation during the months preceding the summer floods. In addition a fresh and constant supply was forthcoming from the springs which appeared at the head of the newly formed Yār. This was turned to use by the formation of the Malak-ālagan colony. The steady growth of the latter was attributed to the water of these springs having remained uniformly ample. Owing to this fact the new settlement was declared to be less dependent than Domoko itself upon the varying amount of *ak-su*, or summer floods. It was interesting to note the uniform assertion that the volume of 'Kara-su' water available for the canals of Domoko had not been reduced by the formation of the new springs. This was fully borne out by the occupation of 'new land' towards the western bank of the Domoko-yār, already noted, and by the vigorous reclamation of former desert waste which on my subsequent visit in March, 1908, I was to find proceeding in the direction of Gulakhma. The obvious explanation was that the new springs were draining strata saturated with subsoil water far lower than those which feed the sources of the Domoko stream some eight or nine miles higher up on the 'Sai'.

Construction of dam averted shift.

The observations I was thus able to gather at the great dam of Domoko help to bring out facts which offer a wider interest both to the geographer and the historical student. It is clear that the opening of the Malak-ālagan colony was the direct result of a movement by which the Domoko stream had endeavoured to carry its water once more towards the old village site abandoned about A. D. 1840. But for the timely construction of the dam practically all the available water would have flowed into the Yār, and the canals irrigating the present village lands would have run dry. In that case, it is safe to assume that the settlement would have been shifted back again to the site of 'Old Domoko'. Of this I had direct proof on my subsequent visit in 1908 when I found the old village lands gradually approached again by the surplus water of Malak-ālagan which was being brought northward along the old canal alignment, still traceable, even without any aid of water from the Domoko stream.

Shifts not necessarily resulting from desiccation.

In the fate of abandonment which threatened the extant oasis and which was averted only by an engineering feat on a scale unusual for these parts, lies a clear proof that changes in the cultivated area of this region may take place on ground peculiarly situated through physical causes which have nothing to do with desiccation and a consequent diminution of the water-supply. However potent a factor desiccation has been in determining the economic conditions of the Tārīm Basin and the historical development dependent upon them, this instance must warn us against necessarily attributing to its action every deserted site which archaeological inquiry may there reveal.

Influence of human factor.

Equally instructive is the lesson we may draw from it as to the influence which a quasi-historical factor, the assertion of human energy, must have in respect of such changes. Had it not been for the effective administration introduced on the Chinese reconquest of the province after the disastrous upheaval of the Muhammadan rebellion, and for the economical development which it has fostered, the damming up of the Domoko-yār would certainly have proved too great a task to be attempted with local resources. The villagers of Domoko would have been left to face their calamity as best they could, and would probably have adopted the remedy indicated by local tradition which tells of repeated shifts of cultivation backwards and forwards.[5] In the same way

[5] Cf. *Ancient Khotan*, i. p. 459.

it is easy to realize that the additional water-supply, which the springs of the Domoko-yār brought to light, would not have led to the formation of the new colony of Malak-ālagan but for the incipient pressure of population which the same economical development has caused to be felt within the old oases.[6] All these facts are plain enough while there is living evidence to enlighten us. But let us assume that the erection of a dam had surpassed local resources, and the present main oasis had been abandoned accordingly, for its ruins to be discovered by a future archaeologist, say, a thousand years hence. How little could he have hoped *then* for any definite proof as to the cause which explained the desertion!

Site near Mazār-toghrak.

Proceeding to the south of the dyke for about a mile along the left bank of the wide reed-covered depression of the Domoko stream, I reached the popular shrine of Mazār-toghrak, marked by a fine grove of old Toghraks from which it derives its name. About 150 yards to the west of it, and less than half a mile from the stream, was the spot, the provenance of 'old Khats', about which Mullah Khwāja had heard from Haidul Khwāja, an aged villager, but had never touched himself. It presented itself as a little plateau covered with scanty pottery, measuring about 210 feet from north to south, and 135 feet across, where widest. Its west edge rose about nine feet above the adjoining sandy ground, manifestly wind-eroded, while the east side sloped down four or five feet to the level occupied by the grove of the Mazār.

Opening of ancient refuse mound.

When on the morning of October 4 I began to clear the plateau, I soon realized that I was opening an ancient rubbish mound adjoining and partly overlying some completely ruined habitations. From its layers, nowhere more than about three feet in depth and covered only with a foot or so of drift sand, there came the same pungent smells of long-decayed animal refuse, with all its unsavoury associations, which I remembered so well from sites explored on my first journey. The deposits were made up chiefly of decomposed wood, animal bones, and decayed lumps of clay evidently from walls which had crumbled away. It did not take long before some finds of small fragments of wooden tablets inscribed with cursive Brāhmī characters came to my help in approximately dating them.

First finds of Brāhmī documents.

The largest, M.T. i. 4, measured about five inches in length and showed the wedge-shape familiar from my finds of tablets at the Niya Site, with the string-hole at the pointed end and two lines of faint Brāhmī writing on one side. Small torn pieces of paper documents followed, chiefly from the north-west portion of the mound, and about a dozen in number. They turned up generally less than six inches from the plastered flooring where this could still be distinguished. The paper fragments showed very flimsy texture, and bore writing only on one side. With the exception of two Chinese pieces all the records were in very cursive Brāhmī script, and presumably in the old language of Khotan. Among them was the torn part of a rolled-up document, measuring about a foot in length with a width of two inches. Disappointing as such scraps were instead of the promised great haul of 'Khats', yet their material and writing sufficed to indicate for the site approximately the same date as the Khādalik ruins.

Miscellaneous finds.

Among the miscellaneous finds there were pieces of rugs, felts, and coarse fabrics, looking like cotton; a hemp shoe (M.T. i. 13), resembling in shape and make one found at Dandān-oilik; a number of clay loom-weights, M.T. 005–007, and other implements used by weavers (M.T. 001, 003; i. 002). For all these as also for such finds as a key and part of a lock in wood, various

[6] In evidence of this I may mention that the Bēg of Domoko declared his charge to be reckoned at about 800 households, whereas in the old official estimate, based on the census of the period immediately preceding the rebellion, it figures with 180 households. No great reliance can be placed on these estimates made for revenue purposes. But the difference is all the same significant, especially if the great decrease of population under Yākūb Bēg's régime is taken into account.

the one hand by the character of both Chinese and Brāhmī writing, and on the other by the structural remains found in the immediate vicinity. It is true, no exact chronological indication could be derived from the small ruined mound some six feet high which I found amidst low dunes about 150 yards to the south-west of the site; it undoubtedly represents the remains of a little Stūpa, dug into long ago. But when eighteen months later I explored the ruin of a Buddhist shrine at Kara-yantak, scarcely more than a mile to the east of Mazār-toghrak, the art-remains there unearthed showed the closest possible agreement with those of the Khādalik temples.

Simultaneous abandonment of sites near Domoko.

The probability thus presents itself that the sites on opposite edges of the Domoko Oasis—Khādalik with Balawaste and Farhād Bēg-yailaki below, and Mazār-toghrak with Kara-yantak above, the present area of cultivation—were abandoned about the same period, towards the close of the eighth century A. D. The problem raised as to the cause of this simultaneous abandonment of sites, the extreme points of which are separated by not less than eighteen miles in a direct line from north to south, is in itself of considerable interest for the archaeologist and the geographer alike. But it is thrust still more forcibly upon our attention when we remember that the same period must have seen the desertion of the large ruined settlement of Dandān-oilik.[7]

Ancient localities dependent on same drainage.

According to the observations which I made during my explorations of 1900–01, and which I have discussed at some length in my former Detailed Report,[8] the Dandān-oilik Oasis received its water from a canal fed by one or several of the streams now irrigating the oases of Chīra, Gulakhma, and Domoko. The careful examination which Professor Huntington has since made of this ground, and the physical changes undergone by it, has fully confirmed this view.[9] Now it is of special importance to note that Dandān-oilik lies fifty-six miles farther north in the desert than Khādalik, and not less than sixty-four beyond Mazār-toghrak. Were shrinkage of the water-supply to be considered the only possible cause of abandonment, this chronological coincidence in the case of localities dependent on the identical drainage system, and yet so widely separated, would certainly be very curious.

Desiccation and climatic pulsations.

That such shrinkage of the available water-supply has taken place in the Tārīm Basin during historical times, and that it must be connected with a general desiccation period affecting the whole of Central Asia and apparently most regions of the continent, if not of the whole earth, is a conclusion which a mass of steadily accumulating evidence is forcing upon the geographical student. It is Professor Huntington's special merit that he has brought out the central fact of that shrinkage and has emphasized the importance of the proofs which systematic archaeological investigation of ancient sites in the desert and near the present oases is able to furnish.[10] At the same time he has looked towards the results of this investigation to support a theory of his own which supposes that the general process of desiccation has been diversified during the historical period known to us by a succession of minor though important climatic changes partaking of a pulsatory nature. By a series of ingenious observations Professor Huntington has endeavoured to show that the climatic pulsations thus assumed, i. e. periods of increased dryness extending over certain centuries followed in turn by periods of a reverse tendency toward more abundant rainfall, have exercised a determining influence on history. He believes them to be reflected with particular clearness in the history of Central Asia, where a strictly mid-continental position would tend to increase the intensity of any climatic variations.

[7] Cf. *Ancient Khotan*, i. pp. 283 sq.

[8] See *ibid.*, i. pp. 285 sqq.

[9] See Huntington, *Pulse of Asia*, pp. 170 sqq., 188.

[10] For a lucid summary of Prof. Huntington's views on the physical changes experienced by Central Asia in historical times, cf. his *Pulse of Asia*, pp. 13 sqq.; on the pulsatory character of the climatic changes assumed by him and their relation to the great cycles of the Glacial period and the small ones known as 'Brückner's cycles', cf. *ibid.*, pp. 365 sqq. For his views as to the effect wrought by progressive desiccation in the Chira-Domoko region, see pp. 170 sqq., and elsewhere, *passim*.

Archaeological evidence for pulsations critically examined.

It does not come within the scope of the present work to attempt a critical analysis in general of this theory which the distinguished American geographer has set forth with great lucidity and captivating literary skill in his *Pulse of Asia*. But since many of the specific arguments there advanced are derived from observations and inferences concerning the ancient sites between Khotan and Lop-nōr which I explored in the course of my journeys, it appears to me obviously desirable that I should indicate clearly in each case what I think systematic archaeological research can safely establish as regards the climatic changes assumed, and what lies beyond its power to prove. The distinction is particularly needful, because in the absence of direct historical information which could throw light on such changes in the Tārīm Basin, Professor Huntington has been led to deduce their chronology mainly from what antiquarian evidence he believed available, and in the reverse way to reconstruct the history of economic and cultural development in this region from the climatic pulsations determined on this basis.

To turn now to the tract which extends along the southern edge of the Taklamakān between Chīra and Keriya, it is certain that the water brought down at the present time by its rivers would be quite insufficient to reach so distant a site as Dandān-oilik. Nor would it be adequate to irrigate, besides the actual oases, the whole of the adjoining area which can be proved to have been cultivated during the pre-Muhammadan epoch. But a recognition of this fact by no means justifies the assumption that, because desiccation has rendered areas once cultivated incapable of reoccupation after long centuries, their original abandonment must have been due to the same cause.

Variety of possible factors causing abandonment of cultivation.

Where man's struggle with adverse conditions of nature is carried on by a highly civilized community, such as archaeological exploration reveals to us in these ancient oases of the Buddhist epoch, human factors introduce elements of complexity which must warn the critical student to proceed warily, and to look for definite historical or antiquarian evidence before drawing his conclusions as to the circumstances and events which determined the desertion of these settlements. Where cultivation is wholly dependent upon a careful system of irrigation, and where the maintenance of the latter is possible only by the organized co-operation of an adequate population, as in these oases adjacent to, or surrounded by, the most arid of deserts, a variety of causes apart from the want of water may lead to the gradual shrinkage or complete abandonment of cultivation. Reduction of population through invasion or pestilence; maladministration and want of security arising from prolonged disturbance of political conditions; physical calamities, such as changes in river courses with which a weakened administration would not adequately cope, etc., might all individually or jointly produce the same result.

Evidence for abandonment of Dandān-oilik.

Thus for Dandān-oilik we have significant evidence in an official Chinese document of the year A. D. 768 found there, which has been fully discussed in my former Detailed Report.[11] This shows in most authentic form that the settlement, finally abandoned soon after A. D. 790, as other dated records prove, had already in A. D. 768 lost a part of its population which had retired to the main oasis owing to the depredations of bandits. In view of this explicit contemporary record there is every inducement for the historical student to connect the final abandonment of this outlying oasis after A. D. 790 with the great political upheaval of the years immediately following, when Chinese authority in Eastern Turkestān after long-drawn struggles finally succumbed to Tibetan invasion. We know from the devastations which accompanied Tibetan predominance elsewhere at that period, that the disappearance of organized Chinese control and protection must have resulted in prolonged political troubles throughout the Tārīm Basin. Without an effectively administered system of irrigation and an adequate population, cultivation in that arid region cannot successfully maintain its

[11] See *Ancient Khotan*, i. pp. 266, 284, with M. Chavannes' translation and notes of the document, pp. 521 sqq.

constant fight with the desert, whatever the supply of water available in the rivers may be. Both conditions were likely to suffer severely during those troubled times, and in no part of the cultivated area would the effect make itself felt so rapidly and completely as in an isolated colony like Dandān-oilik.

Doubts about causes of abandonment elsewhere.

It is obvious that a cause which would suffice to explain complete abandonment in the case of Dandān-oilik, might reasonably be held capable also of accounting for the shrinkage which we must assume to have taken place about the same time in the occupied area immediately to the north and east of the present Domoko. But it will be well to remember the lesson which the story of the Domoko dam, as above detailed, can teach us, and to realize that we can never be sure of correctly gauging the cause or causes which have produced the change in each particular locality, unless definite historical records come within our reach. Neither silent ruins nor scientific conjecture can replace them, and while reliable materials of that kind remain as scanty as now, we can scarcely expect the old sites to give definite answers to all the questions which arise about the physical past of this region.

LIST OF OBJECTS EXCAVATED AT MAZĀR-TOGHRAK

M.T. 11. a. Wooden key like Kha. v. 001. Had six pegs in two rows; four missing, one broken in hole, and one complete. Length $4\frac{5}{8}''$ (handle $2''$) $\times \frac{7}{8}'' \times \frac{9}{16}''$ to $\frac{3}{4}''$.

M.T. 11. b. Wooden bolt like Kha. v. 006. Six holes in two rows. Groove for check-pin on R. side ($2\frac{3}{4}'' \times \frac{5}{16}'' \times \frac{3}{8}''$). Does not fit M.T. 11. a. $5\frac{1}{2}'' \times 2'' \times \frac{5}{8}''$.

M.T. 30. Wooden tablet, broken at one end. Hole at other end. *Obv.* rounded. One l. Chin. writing (twelve characters) faint. *Rev.* flat. Blank. Rotten. $11\frac{3}{4}'' \times 1'' \times \frac{3}{8}''$.

M.T. 32. Wooden tablet, effaced. One end broken. Hole at other end. Both sides flattened. No trace of writing. Rotten and insect-eaten. $15\frac{3}{4}'' \times 1'' \times \frac{9}{16}''$.

M.T. 41. Wooden tablet, effaced. Complete. Hole at one end. At other end five cross-grooves. No trace of. writing. Both sides flat. Rotten, insect-eaten. $12\frac{7}{8}'' \times 1\frac{3}{8}'' \times \frac{1}{2}''$.

M.T. 47. Wooden tablet, effaced. Broken one end. Hole at other end. Both sides slightly rounded. One shows traces (?) of writing and has three grooves cut across broken end. Rotten. $12'' \times 1\frac{1}{4}'' \times \frac{5}{8}''$.

M.T. 48. Wooden tablet, effaced. At one end hole, other end broken. Rotten. No trace of writing. $12\frac{3}{8}'' \times 1'' \times \frac{3}{8}''$.

M.T. 58. a–m. Twelve frs. of wooden slips. (*a*), (*b*), and (*c*) have one side crossed with incised lines (3, 5, and 5); (*d*) has hole at one end. Rotten, no writing visible. Greatest length $7\frac{3}{8}''$; greatest width $1\frac{1}{8}''$.

M.T. 60. Wooden tablet. Broken both ends. *Obv.* rounded. No trace of writing. *Rev.* flat. At one end traces of one l. Chin. writing. $6\frac{3}{8}'' \times \frac{7}{8}'' \times \frac{3}{8}''$.

M.T. 62. Wooden tablet, effaced. Broken both ends. *Obv.* convex. *Rev.* flat. No trace of writing. Rotten. $4\frac{5}{8}'' \times \frac{7}{8}'' \times \frac{3}{8}''$.

M.T. 64. Wooden tablet. Broken at each end, and half thickness split away from middle. No trace of writing. Rotten. $10\frac{1}{2}'' \times \frac{7}{8}'' \times \frac{5}{8}''$.

M.T. 66. Wooden tablet. Broken at each end. One side flat, one rounded. No trace of writing. Insect-eaten, Rotten. $9\frac{1}{4}'' \times 1\frac{1}{8}'' \times \frac{7}{16}''$.

M.T. 67. Wooden tablet, effaced. Broken at each end. Trace of hole shows in break at one end. Both sides rounded. No trace of writing. Rotten. $9\frac{3}{4}'' \times \frac{15}{16}'' \times \frac{7}{16}''$.

M.T. 68. Wooden tablet, effaced. Broken at each end. Both sides flat. On one side six cross-lines near one end. No trace of writing. Rotten. $8\frac{1}{2}'' \times \frac{7}{8}'' \times \frac{1}{2}''$.

M.T. 69. Wooden tablet, effaced. Broken at one end. Hole at other end. Each side slightly rounded. No trace of writing. Rotten. $7'' \times \frac{7}{8}'' \times \frac{1}{2}''$.

M.T. 71. Wooden tablet, effaced. Broken at one end. Hole at other end. Both sides rounded. No trace of writing. Rotten. $8\frac{5}{8}'' \times 1\frac{1}{8}'' \times \frac{7}{16}''$.

M.T. 72. Wooden tablet, effaced. Broken at one end. Hole at other end. Oblong in section. No trace of writing. Rotten. $7\frac{1}{4}'' \times \frac{15}{16}'' \times \frac{1}{2}''$.

M.T. 75. Wooden tablet. Rectang. in section. On one side traces of writing. Rotten. $4\frac{1}{2}'' \times 1'' \times \frac{3}{4}''$.

M.T. 76. Wooden tablet. Broken at one end. At other end hole. One side flat, other rounded. No trace of writing. Rotten. $3\frac{1}{4}'' \times \frac{13}{16}'' \times \frac{3}{8}''$.

M.T. 78. Wooden tablet, effaced. One end broken. *Obv.* convex. *Rev.* flat. Near complete end groove cut across, and next it seven lines scratched. No trace of writing. Hard. $9\frac{1}{4}'' \times \frac{7}{8}'' \times \frac{3}{8}''$.

M.T. 79. Wooden slip, effaced. Rotten. No writing visible. Both ends broken. $8\frac{3}{4}'' \times 1'' \times \frac{1}{2}''$.

M.T. 81. Piece of rug. Pattern in red, blue, and green bands. On blue band, white circular spots. On red, blue serpentine scroll. Simple geometrical forms on other bands. Warp, hemp string. Weft, (?) wool. Gr. M. 7½".

M.T. 001. Round wooden stick tapering to knobbed ends. Prob. weaver's instrument for tightening threads, like modern '*oinoruj*'. Cf. Kha. vi. 8. Hard wood, smooth and well preserved. 4⅝" × 1".

M.T. 002. Fr. of brown felt, ragged. Gr. M. 4". **Fr. of brown fabric,** cotton (?). Gr. M. 2½".

M.T. 003. Black clay spindle-whorl (or loom-weight). Convex and concave. Incised patterns. Radiating petals on convex side with dots at ends. Row of circles with centres marked on concave side. On edge slanting rows of four dots separated by two lines. Diam. 1½"; thickness 9/16"; diam. of hole ⅜".

M.T. 005. Tapestry-weaver's loom-weight. Grey clay. Rudely conical. Base, slightly concave, has incised ring. Diam. 1" to ½"; diam. of hole ¼"; thickness ½".

M.T. 006. Tapestry-weaver's loom-weight. Yellowish clay. *Obv.* convex. *Rev.* flat. Cf. M.T. 005. Diam. 1¼"; diam. of hole 5/16"; thickness ⅛".

M.T. 007. Tapestry-weaver's loom-weight. Grey clay. Dome-shaped. Cf. M.T. 005, 006. Diam. 15/16"; diam. of hole ¼"; thickness ⅜".

M.T. 008. a–d. Fabrics. (*a*) Felt pad of elongated kidney-shape covered with buff silk, length 6½". (*b*) Part of shoe-upper. Hemp warp, wool weft, 10" × 2½". (*c*) Ball of hemp string. (*d*) Fr. of coarse cotton (?) fabric.

M.T. 009, 0010. Frs. of two similar drawings, of horse on buff-laid paper, 009 shows hind-legs, tail, and back with high-pommelled saddle; 0010 only hind-legs and tail. Black outline filled in with red wash. Crude work. 6" × 4½" and 3" × 2".

M.T. i. 1. Fr. of plaster. Traces of gilding left on white backing. Irregular shape. 1¾" × 1⅜".

M.T. i. 12. Small vase, hand-made, of light red clay, made in mould. Out-bent rim much chipped. Pronounced belly. No foot. Remains of small ring handle. Round belly two lines incised. H. 2¼"; diam. of rim 1⅝"; of base 1".

M.T. i. 13. a. Part of hemp shoe, with thick woven sole, open vertical string sides, and upper edge of stout double cord closely wrapped with finer string. At back of heel a solid woven strip, the thick warp of which divides R. and L. to form upper edge. Sole 7" × 3¼". (*b*) Portion of front of upper of similar shoe. 2¼" sq.

M.T. i. 001. Specimen of grain, chiefly wheat.

M.T. i. 002. Wooden comb, used in weaving (now called *panje* in Turkestān). Cf. N. 0027. 7" × 6" × 13/16".

M.T. E. 001. Rape-seed, specimen.

CHAPTER VI

THE NIYA SITE

SECTION I.—RETURN TO THE RUINS BEYOND THE NIYA RIVER END

ON October 6, 1906, I left the Domoko tract and resumed my march eastwards. My next archaeological goal was the ancient site in the desert beyond the end of the Niya River where I had made important discoveries in 1901, and where I knew that ruins then reluctantly 'left over' were still awaiting exploration. Having passed along the road leading to the Keriya and Niya oases twice before, I endeavoured to cover it as rapidly as possible. But I took occasion slightly to vary the route by visiting Achma, a new and flourishing oasis to the north of the high road and some six miles from the extreme eastern edge of Domoko cultivation. It owed its existence to the sudden appearance of springs some fifteen years earlier which added so largely to the water of the Kara-kīr Yār that an area now said to support some six hundred to eight hundred households was rapidly brought under cultivation. It was an interesting instance of the successful fight with the desert which this portion of the Taklamakān edge appears to have witnessed at recurring intervals. But the account given of it by Professor Huntington and the absence of any traceable remains of earlier occupation make it unnecessary for me to enter here into details.[1] Visit to *Achma.*

From my night's camp by the edge of the Shīvul marshes I visited next day a small 'Tati' with old pottery débris, known as *Jigda-kuduk*, of which information had reached me. I found it situated about four miles to the south of the Shīvul Langar, where the dune-fringed marsh approaches the bare gravel glacis sloping down from the foot of the hills about Tört-Imām and Polur. There was nothing to indicate clearly the date of occupation for this 'Tati'. But as the present edge of the Keriya oasis proved only about two miles away eastwards, it is certain that it must have once formed part of this great cultivated area and received irrigation from the westernmost of the Keriya River canals. I may note here in passing that when in March, 1908, I rode to Keriya by the high road, I found the edge of cultivation near Yaka Langar advanced fully a mile beyond the point where I had first struck it in 1901. 'Tati' of Jigda-kuduk.

The purchase of seven big camels which were to prove thenceforward the mainstay of my transport on my desert travels, along with other practical tasks, detained me at the town and district head-quarters of Keriya until October 13. Then two long marches carried me to Niya, the last Halts at Keriya and Niya.

[1] Cf. Huntington, *Pulse of Asia*, pp. 181 sqq. The information given to me about the rise of the new colony, *Achma* or 'opening', fully agreed with what Prof. Huntington has recorded. It deserves, however, to be noted that, in the 'old times' of pre-rebellion Chinese rule and long before the appearance of the new springs, parts of the Achma land are said to have been intermittently cultivated by people of the small neighbouring oasis of Laisu. The remarkably level expanse of the ground in the southern part of the oasis which I saw, where reeds and tamarisk growth are being steadily displaced by fields, fully agrees with this local tradition. At that time, probably during the first half of the nineteenth century, the then scanty water of the Kara-kīr Yār is said to have been turned each year in turn into only one of the four canals now irrigating the Achma area. I have observed a corresponding procedure at several of the small oases west of Khotan, such as Moji, Zanguya, Piālma.

small oasis eastwards, where I had to prepare rapidly for fresh exploration at the ancient site in the desert northwards. It was encouraging to learn from my old 'treasure-seeking' guide Ibrāhīm, 'the miller',[2] that the further search I had enjoined him to make for ancient dwellings hidden away amidst the dunes had been fruitful. It was equally pleasing to see how readily my old Niya diggers of 1901 rejoined me. I was resolved this time to take out as many labourers as I could possibly keep supplied with water at the site, and thus to expedite the excavation of any newly discovered ruins. So it was encouraging that, with the example set by my 'old guard' and the influence still possessed here by Ibrāhīm Bēg, my energetic old Darōgha, who had rejoined me at Khādalik, a column of fifty men, with additional camels and supplies for four weeks, could be raised within a single day's halt.

March to Niya River end.

I have shown in my former Report that the present Niya corresponds to the town of *Ni-jang* 泥壤, which Hsüan-tsang mentions as the eastern frontier station of Khotan,[3] and that it is meant probably also by the *Niña* to which one of the Kharoṣṭhī documents excavated by me in 1901 at the Niya Site refers. Nor need I give details about the next three marches which carried me down to the present end of the Niya River, seeing that I have described them in my Personal Narrative. An account of the riverine forest belt traversed and of the curious desert shrine of Imām Ja'far Sādiq near the river's end has already been given in my former Detailed Report.[4] By October 18 we reached Tülküch-köl, a small lake fed by springs from the dying river, some four miles below the Mazār, where there is a little cultivation occupying some fifteen men in a clearing amidst the luxuriant jungle (see Map No. 37). Next morning, after making a depot there of all stores not immediately needed and filling all available water-tanks and goat-skins, we left behind the last abode of the living and also the present end of the life-giving river.

Start for ruins.

I was anxious to move that day as far as possible northward amongst the ruins of the ancient site to which my thoughts had turned so often since those happy labours of the winter of 1901. But unexpected finds *en route* delayed my arrival. I had just passed, about five miles below Tülküch-köl, the last deserted shepherd's hut in the gradually thinning jungle, when Ibrāhīm and his fellow guides told me of some remains they had discovered since my visit among the high and closely packed tamarisk-cones east of the route. After making my way through these for about a mile and a half north-eastwards I found myself suddenly in a small open area measuring about two hundred and forty yards from north to south, and about half that distance across.

First remains of ancient houses.

The much-eroded ground showed remains of fences with fallen trunks of poplars and mulberry-trees, marking ancient orchards, and near its centre the débris of some dwellings constructed in timber and plaster. Owing to the far advanced erosion of the open ground there was no cover of sand or refuse to offer protection to these scanty relics. But in one place the foundation beams of walls could still be traced *in situ*. They extended over a space of about fifty-seven by twenty-six feet, a single beam, on one side of what evidently was the main room, measuring thirty-two feet in length. Little, however, survived of the wattled walls which once rose above them. Yet even thus my familiarity with constructive peculiarities previously observed sufficed to convince me that the remains dated back to the same period as those of the main site ahead, i. e. the third century A. D.

Southern extension of ancient site.

The whole occupied a small plateau rising about eight feet above the eroded ground, and isolated witnesses edged it. To the north-west close by the foot of one of the encircling tamarisk-cones a row of big trunks of dead mulberry-trees still rose upright. Long centuries of exposure to the desert winds had left nothing for me to dig here. But the mere fact of the area of ancient

[2] Cf. for his first discovery of Kharoṣṭhī documents and the help this gave me, *Ancient Khotan*, i. p. 312.

[3] Cf. *ibid.*, i. p. 311.

[4] Cf. *Desert Cathay*, i. pp. 266 sqq.; *Ancient Khotan*, i. pp. 312 sqq.

occupation stretching so far south was of considerable interest. It suggested that more ruins, perhaps, might be hidden in this maze of high tamarisk-covered sand-cones; but to search for them on such ground would cost time, and that I could not afford. In any case it was inspiriting to find myself once more among the shrivelled trunks of poplars and fruit-trees which had flourished when Rome was still ruled by its Emperors.

Belt of living Toghraks.

After regaining the route we again passed for over a mile through a belt of big living Toghraks. Most of them, by the size of their trunks and their much-fissured bark, seemed of great age, and plenty of dead trees were lying in the thickets between them. Here and there I caught sight of a narrow and tortuous channel emerging from the sand, just such as might have been cut by the last summer flood which the dying river succeeded in pushing out to this border area of dead and living forest. But that may have been centuries ago; for such large specimens of the wild poplar strike their roots to so great a depth as to be quite independent of occasional surface watering. We had left this living forest with its brilliant autumn colours behind us and wound our way for a mile north-westwards amidst closely set tamarisk-cones rising to thirty feet or more, when I found myself once more at the little opening where rows of completely bleached trunks of poplars and mulberry-trees, still upright, mark an ancient orchard or farm-yard already noticed in 1901. The sand seemed now somewhat less heavy, and for about sixty yards I could trace the line of ancient trees planted at regular intervals. The level on which they stood rose about ten feet above the eroded ground near by.

Newly sighted remains.

From here the route taken by Sāduk, the shepherd guide from the Mazār, who had offered to show me some ruins not previously examined, and who was marching ahead with the water-carrying camels, seemed to strike slightly more westwards than the one I followed in 1901. After less than half a mile it brought us, to my surprise, to a small open plain, about three hundred yards long from south-east to north-west, where, by the side of bare eroded ground strewn with potsherds and similar hard débris, substantial rush-built fences and lines of dead poplars rising from the low sand caught the eye. Near the centre of this area a small plateau rising island-like above the eroded ground bore the remains of a dwelling, constructed partly of timber and plaster walls and partly of mere rush walls covered with clay. In the course of my subsequent survey it received the number N. XLI (see plan, Plate 18, and the general plan of the site, Plate 7), and is shown also, along with the adjoining ground, by the panoramic view (Fig. 75). Nowhere did the walls stand more than two feet above the mud floor, and all the rooms were small.

Trial excavation at ruin N. XLI.

Ruins of even such modest dimension had, as I remembered well before, yielded interesting finds at this site, and chance offered here again an encouraging experience of this. I had scarcely put the few men with me to work at clearing a small room, only eight feet square at the north-east corner of the house (marked *a* in plan, Plate 18), as a kind of experimental scraping, when there emerged in succession three excellently preserved wooden tablets inscribed in early Prākrit language and in Kharoṣṭhī script, showing the same types of wooden stationery with which my former excavations at this site had rendered me so familiar. One (now marked N. XLI. 1) was a complete double rectangular tablet, retaining its wooden cover or envelope; another, N. XLI. 3, the under-tablet of a similar document; and the third a 'Takhtī'-shaped label with a string-hole in its diamond handle. There were found also the handle and top of the bowl of a bronze spoon, and what looked like a chisel in bronze. There was nothing novel about these remains of ancient correspondence. And yet I had good reason to greet them with joy; for they held out a cheering promise at the outset, and also furnished the conclusive proof I was looking for, that this area, fully four miles to the south of the first ruins explored in 1901, held remains belonging to the same early period.

Fresh group

As I was anxious to bring my big convoy of men and supplies that day as near as possible to

of unexplored ruins, N. xxxvi–xl.

the large group of unexplored ruins which Ibrāhīm had reported to the north-west of the site, I had soon to tear myself away from this encouraging spot. Nor could I spare time for more than a very rapid survey of the group of ancient houses (N. xxxvi–xl in site plan, Plate 7) upon which we came about three-quarters of a mile ahead amidst wild poplars, living and dead. A line of high tamarisk-covered sand-cones had effectively masked these ruins from the more easterly route followed in 1901. It was interesting to see old but still amply-leafed Toghraks growing near these ruins. Most of their companions were dead, and raised their gaunt trunks and branches in varied states of decay. There could be little doubt that this jungle, now approaching extinction, had grown up long after the dunes had begun to overrun the deserted ancient settlement. Yet even so I could not look without a feeling of respect upon these patriarchs still flourishing at their crowns, however withered and fissured their trunks. For how many centuries these last outposts of the riverine jungle had faced the constant aridity and climatic extremes of the desert!

Condition of previously explored ruins.

From there a weary tramp of over three miles across more open ground with broad dunes and rare tamarisk-cones brought us to the two large residences, N. iii and N. iv, which were the southernmost of those explored in 1901. The years since passed had dealt gently with the ruins. Scarcely a detail in the state of erosion or the decay of their exposed timber differed from the picture which my photographs and my memory retained. Only a few inches of sand covered the big turned finials and other large pieces of wood-carving which I had found in N. iii, the 'Ya-mên', as we called the ruin, along with the ancient chair, which I had been obliged to leave behind then. I was glad to see that the drift sand caught by the walls completely filled the rooms we had excavated, affording protection as before. But the dunes close by appeared to have been lowered a little. After another mile and a half northwards the brick structure of the small Stūpa was reached where my first camp at the site had stood. Here the winds appeared to have cleared parts of the treble base then hidden under drift sand; but no time was available for closer examination.

Arrival at ruins 'left over'.

Across the high swelling dunes to the north-west I managed to drag my straggling column onwards for close on two miles before nightfall compelled us to halt on a small patch of eroded ground. I knew that we were here close to some ruined houses which I had sighted on the last day of my previous stay, but had then reluctantly been obliged to leave behind unexcavated as a reserve for another visit.[5] While my tent was being pitched, I set out to find them, and soon set foot amidst their sand-buried timber. At the ruin I struck (N. xxvi in plan, Plate 7), a large wooden double bracket, decorated with carvings in Gandhāra style, lay exposed on the surface. While I sat down on it for a short rest my thoughts were full of gratitude for the kindly Fate which had allowed me to return in time to this fascinating ground in spite of distance and many difficulties. But I little dreamt then how rich an archaeological haul was waiting for me at one of the nearest ruins.

Section II.—THE NORTH-WESTERN GROUP OF RUINS

Reconnaissance for ruins north-eastward.

On the morning of October 20 I divided my party. Surveyor Rām Singh who had rejoined me at Niya from work in the mountains, was dispatched north-eastward with three camels and an adequate supply of water to search for the ruins which Islām Ākhūn, a Niya villager, had offered to show at the distance of one march from the site as we knew it. Islām Ākhūn declared that he had visited the site in the winter of 1902 in company with a large party composed mainly of adventurous 'Kalandars', or mendicants, 'stranded' at Imām Ja'far Sādiq's shrine, in order to search for

[5] See *Ancient Khotan*, i. p. 380, and ii. Pl. XXVII, for ruin N. xii.

'treasure', and in the course of five or six days' fruitless wanderings he had come upon 'ten or twenty old houses' to the east or north-east of the Stūpa. Vague as the treasure-seeker's topography seemed to be, the Surveyor was to endeavour to locate the ruins and then to push due north into the desert as far as he could in a day without exhausting the camels. I myself with the rest of my column tramped on under Ibrāhīm's guidance over the high sands to the north-north-west, in quest of the ruined dwellings upon which my old guide had lighted in the course of a prolonged but avowedly profitless 'treasure-seeking' expedition in the winter of 1904.

Ruins discovered by Ibrāhīm.

Soon after passing the ruin N. XII we left behind the last few living Toghraks and had to make our way over steep dunes. These rose closely packed amidst a maze of sand-cones, crowned on their top with still living tamarisk scrub. Progress was necessarily slow here, and it took fully an hour to cover the two miles which brought us first to a small 'Tati' with pottery débris and then to the nearest of Ibrāhīm's promised ruins. It proved that of a timber-and-plaster dwelling (N. XXII), half-covered by a big dune, just beyond the line to which living tamarisk growth extended. A tank surrounded by fallen poplars lay close by. Marching on over absolutely bare dunes for another mile and a half, I passed one after another of the ancient houses reported. They lay in a line along what manifestly had been the extreme north-western extension of a canal once fed by the Niya River. In full accord with the indications which Ibrāhīm had given when first talking to me about these ruins at Niya, their line proved to be situated within two miles to the west and north-west of the northernmost group of ruins, N. VIII, we had been able to trace in 1901 (cf. the site plan in Plate 7). But the high swelling ridges of sand intervening had then kept them from view. For my camp I selected a patch of open eroded ground conveniently near the northern end of the ruins I had come to explore, and lost no time in starting my day's work at the farthest ruined structure we could trace. Patches of pottery-strewn ground cropped up for some distance further north. But though the view over the bare expanse of dunes in that direction was open and reached far, we could sight no more structural remains, such as posts rising above the sand would usually indicate from a distance.

Excavation started at ruin N. XIII.

The ruin first excavated, and numbered N. XIII in continuation of the work done in 1901 (see the site plan, Plate 7), occupied the narrow northern end of what, owing to the depression produced around by wind erosion, looked like high ground. The latter extended in continuation of the line of a small irrigation canal still marked by fallen rows of dead poplars. On the north and east sides the ground had been scooped out to a depth of fully fifteen feet below the original level; to the west the depression produced was about ten feet. The ruin was that of a comparatively small dwelling, measuring about fifty feet square in its extant portions, as seen in the detailed plan (Plate 10). The sand which had accumulated in it rose nowhere more than four feet above the floor level. But this had sufficed to protect not merely a number of interesting small objects but also enough of the walls to show the essential features of construction.

Construction of walls.

In the main rooms the walls were built of timber and plaster exactly after the fashion which my excavations of 1901 had proved to prevail in all more substantial houses of the site.[1] Hence no detailed description is needed here. The matting which served as core or backing for the plaster of the walls, was fixed to an elaborate and carefully fitted framework of posts in 'Terek' wood, and generally consisted of diagonally woven tamarisk strips. This is clearly seen in the photograph (Fig. 47) which shows the main rooms to the south after clearing. Only in the room iii which seems to have served as a kitchen, this diagonal matting was replaced by horizontally fixed layers of reeds, a system which I had met with also elsewhere at this site, though more rarely. The small outside apartments on the west side had walls of much rougher construction, the core consisting here

[1] See *Ancient Khotan*, i. p. 317.

47. SOUTH ROOMS OF RUINED DWELLING N. XIII, NIYA SITE, AFTER EXCAVATION.
Room i in foreground with remains of ancient household furniture and implements.

48. RUINED DWELLING N. XX, NIYA SITE, SEEN FROM EAST, IN COURSE OF EXCAVATION.
Kitchen room i seen in foreground, with large jar.

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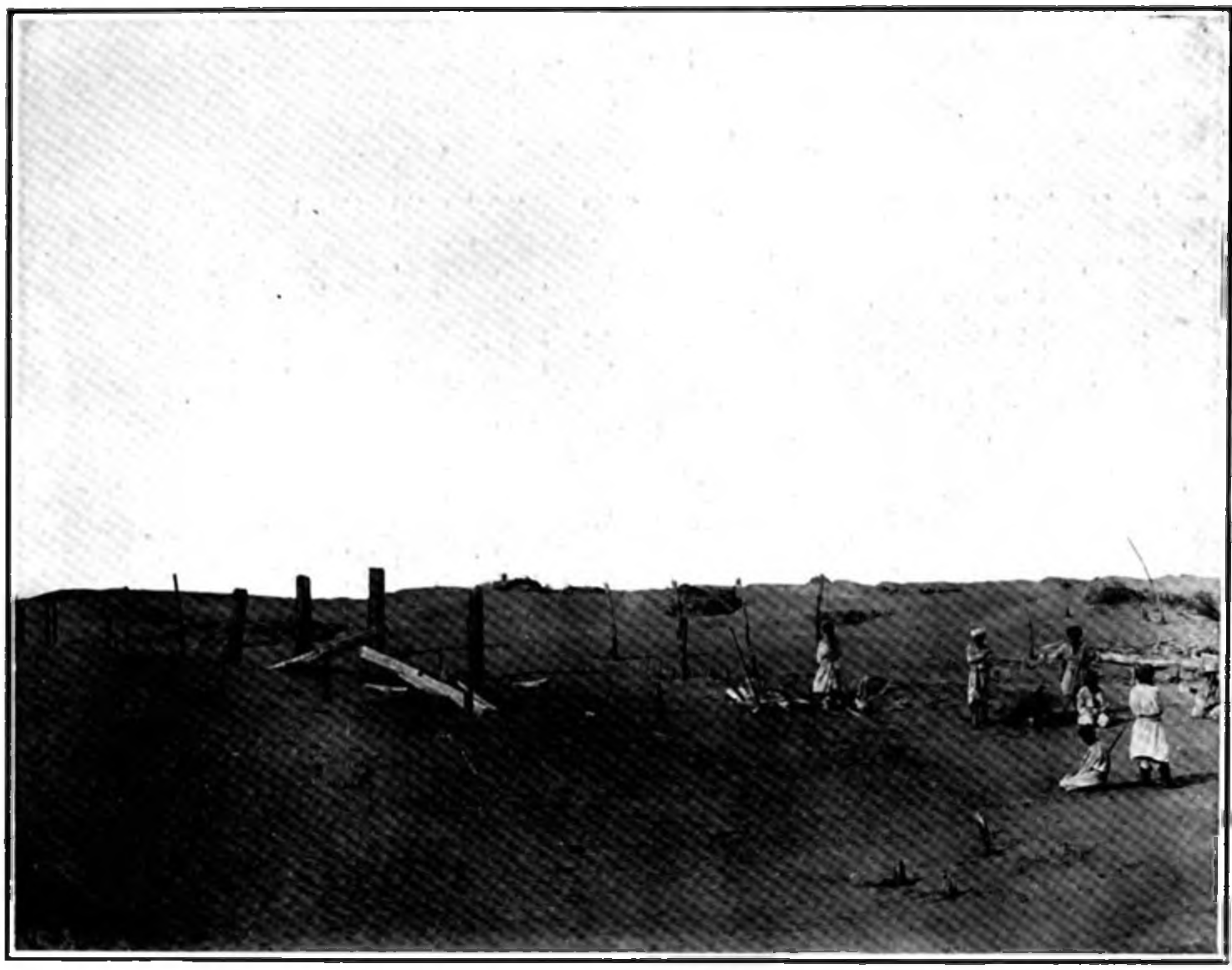
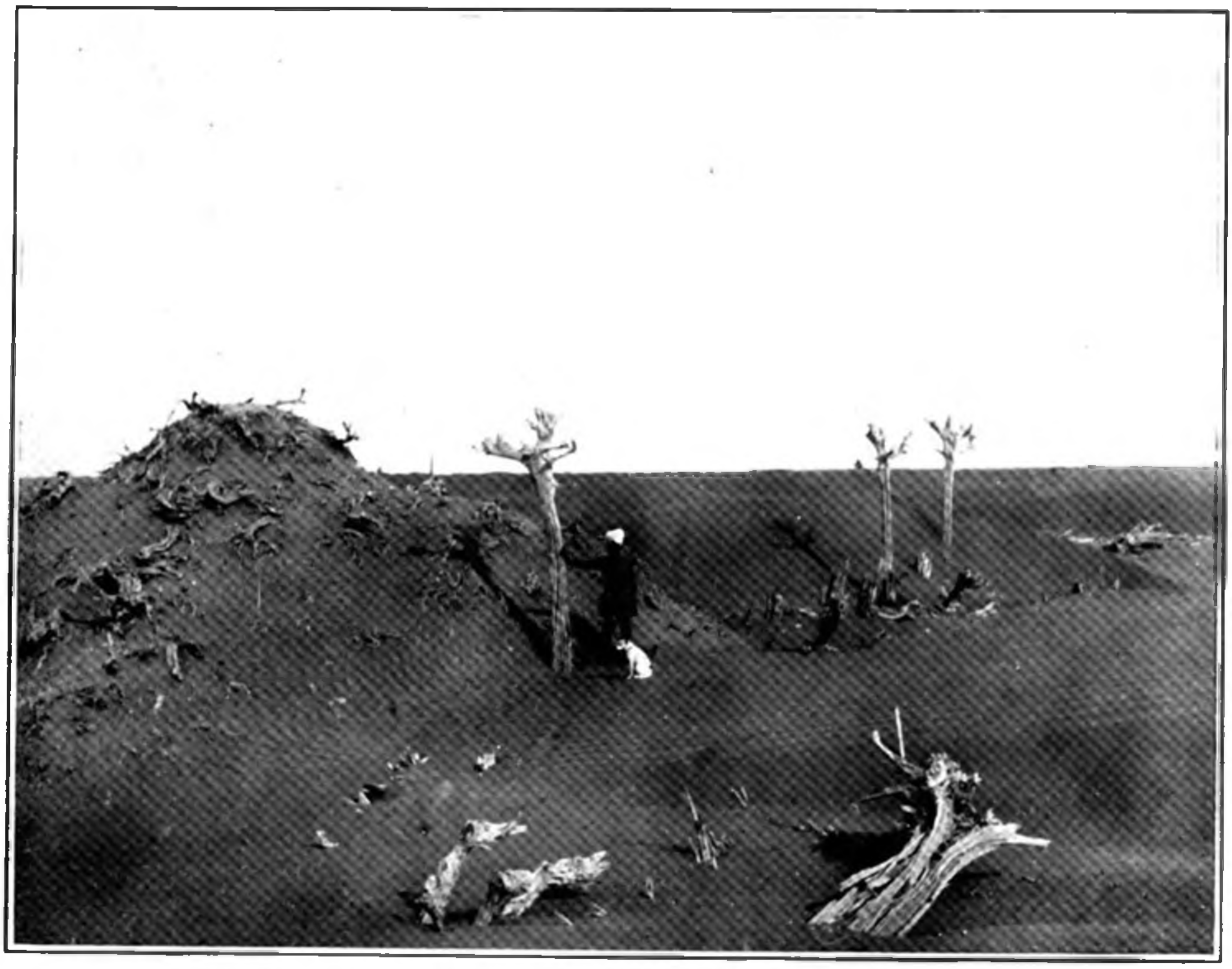
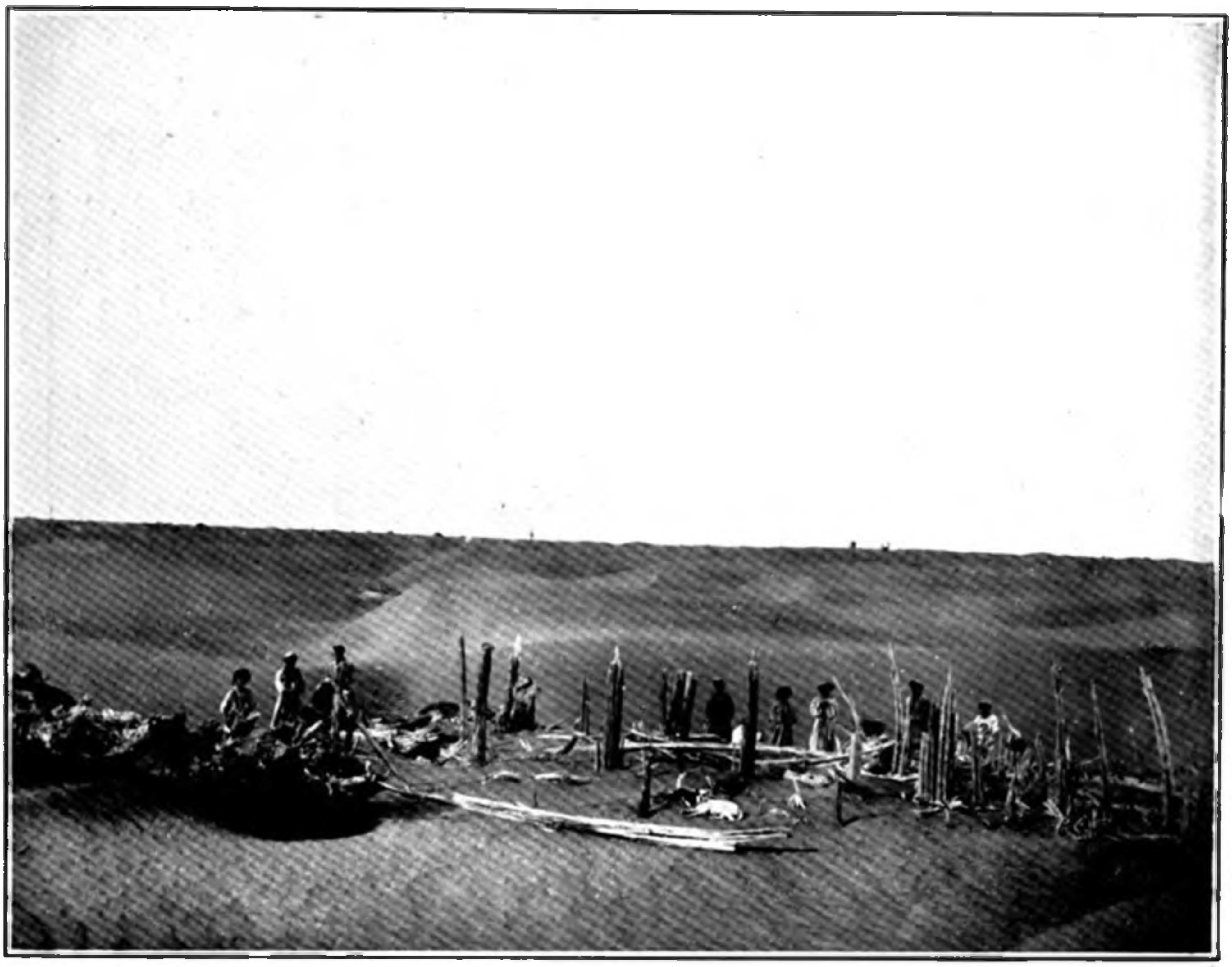


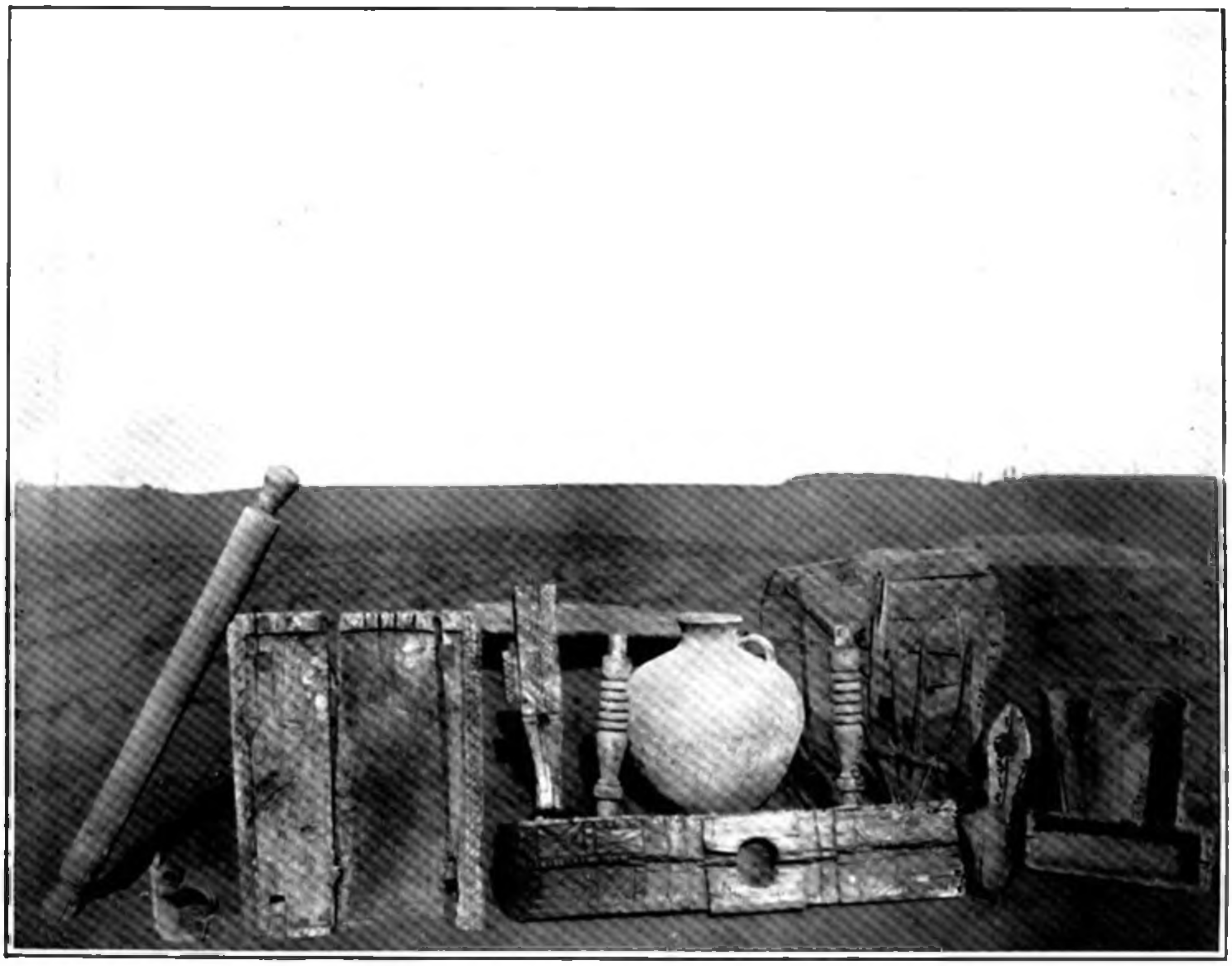
49. REMAINS OF HALL OF RUIN N. XIV, NIYA SITE, SEEN FROM S.W.



51. DEAD MULBERRY TREES IN ANCIENT ORCHARD, S.E. OF RUIN N. XVIII, NIYA SITE.



50 EASTERN PORTION OF RUINED DWELLING N. XIX, NIYA SITE, BEFORE EXCAVATION, SEEN FROM SOUTH.



52. REMAINS OF HOUSEHOLD FURNITURE AND IMPLEMENTS EXCAVATED IN RUINS N. XIII, XV, NIYA SITE.

instance of the covering-tablet of a double-wedge document in wood having subsequently been transformed into a detached seal case, such as I had found in the course of my former excavations.[9] Nor should it pass without notice that the rectangular double tablet N. XIII. ii. 1 shows on the reverse of its under-tablet the unusual feature of an endorsement of which the first line is in Brāhmī, and that, according to information kindly supplied by Professor Rapson, N. XIII. ii. 2 is an exact duplicate of this tablet, but wanting its endorsement.

Miscellaneous implements found in N. XIII.

The narrow apartment, iii, to the north-east also yielded half a dozen Kharoṣṭhī documents on wood, though their condition was not so perfect. To judge from the fragments of earthenware pots and the miscellaneous household utensils found there, it had evidently served as a living-room. Among the latter articles, seen in the photograph Fig. 52, were a mouse-trap (N. XIII. iii. 001; Plate XIX); a boot-last (N. XIII. iii. 002); a weaver's wooden comb; a bucket and a pitchfork in wood, and two baskets (see Fig. 47). In the small room, iv, adjoining was found a flat wooden tray, measuring about two feet by one foot five inches, which is seen in the photographs; this, on account of its raised edge decorated in chip-carving, my labourers took for an eating-tray—in all probability rightly. Finally, from the narrow room, v, there came the boldly carved wooden panel, N. XIII. v. 1 (see Plate XIX), once belonging to some piece of furniture, and bearing in its decorative floral design unmistakable resemblance to the carved chair already referred to. The large round board in wood, seen in Fig. 47, probably served to close a sunk wooden trough, while the use of the long roller-like implement seen on the extreme left of Fig. 52 is uncertain.

Clearing of ruin N. XIV.

After clearing this dwelling we retraced our steps in the afternoon to the remains of a far larger structure, N. XIV, situated about a quarter of a mile to the south-west, and quite close to our camping-place. Posts, bleached and splintered, but still rising up to nine feet in height, marked here the position of the walls of a hall, of which the ground-plan (see Plate 9) showed the imposing dimensions of fifty-six by forty-one feet. The massive pillars once supporting its roof near what must have been an atrium-like central opening, still rose in their places and looked also most impressive (see Fig. 49). Unfortunately, except for these solitary posts, the walls of this hall, i, together with any objects which may have once been left between them, proved completely eroded, and the sand covering the ground lay only one or two feet high. Quite close to the north-east there lay some scattered timber débris from a dwelling, ii, also completely destroyed by erosion. Neither here nor in the hall did the clearing effected yield any finds.

Discovery of large refuse heap.

But as I traced eastwards the scanty indications left by the walls of another large and badly eroded structure, iii, I realized quickly that most of the ground underneath it was made up of the layers of a huge refuse heap. From north-east to south-west it extended for over fifty-three feet, and its width seemed about fifty. Previous experience, such as I had gained at that rich mine, N. XV, in 1901, supplied sufficient reason for digging into this unsavoury quarry, though the pungent smells its contents emitted, even after more than sixteen centuries of burial, were made doubly trying by a fresh easterly breeze which drove the fine particles of dirt, etc., impartially into one's eyes, throat, and nose. A wind-eroded depression eastwards facilitated the work of my trenches, and thus it was soon ascertained that the great mass of these rubbish accumulations consisted of horse and camel dung mixed with plentiful straw and twigs. Rags of various fabrics, apparently woollen and hempen, as well as torn pieces of felt, dressed leather, and skin, also turned up in them. By the evening I was able to recognize that some wooden posts, of which the tops had just been visible above the surface of the ground, belonged to a small boarded enclosure, about eight by six and a half feet, completely embedded in the refuse. The clearing commenced here

[9] See *Ancient Khotan*, i. pp. 402 (N. XV. 74), 411; ii. Pl. CV.

had yielded a few rags of fine silk (N. xiv. iii. 001), the small fragment of a Kharoṣṭhī document on leather (N. xiv. 005), and a little 'Takhtī'-shaped wooden tablet inscribed with Chinese characters of exquisite penmanship, when nightfall put a stop to our first day's labours.

Boarded enclosure embedded in refuse.

The excavation was continued next morning with all the available labour, and allowed us to cut through these layers of stable refuse to the natural soil, and to lay bare the boarded enclosure. It proved to be open to the south. Its floor lay fully seven feet below the level occupied by the extant débris of structures, and its wooden boards standing to a height of five and a half feet were in perfect preservation. The quantity of straw and loose oats found at the bottom of the enclosure seemed to indicate that the latter had originally served to store fodder, etc., for the horses and other animals which, as the refuse accumulations around showed, must have been stabled near by for a long time. But there was also found evidence that the enclosure had at one period been utilized besides as a sort of dustbin for some earlier habitation. Thus in the midst of coarser refuse, and intermingled with various grains, there were found curious sweepings of all sorts—rags of manifold fabrics, in silk, wool, hemp, and felt; pieces of embroidered leather and felt; plaited braids and cords; fragments of fine lacquer ware; broken implements and fittings in wood, etc. To these I shall refer briefly hereafter.

Find of Chinese labels of wood.

But far more important proved the find of over a dozen small label-like slips of wood which were discovered scattered amidst all this refuse. Eight among them retained Chinese inscriptions of beautiful penmanship and in complete preservation. One complete and two fragmentary pieces also showed some Chinese characters, while the rest were blank. I greatly regretted at the time that, prompted by the desire to save my excellent Chinese secretary weary tramps across dunes and the hardships of desert campings to which his previous career had in no way trained him, I had left him behind at Tülküch-köl in charge of my depot. But I felt still more regret later, when the antiquarian interest of these small records was fully revealed to me.

Decipherment of Chinese labels.

From such rapid examination as Chiang Szŭ-yeh was able to make of them *en route* after our reunion, I gathered, indeed, that from the character of their contents these slips must have served as forwarding notes attached to various presents. But it was only through the scholarly analysis and translation furnished to me in 1910 by M. Chavannes, and now embodied in his volume of this Report, that I became aware of the special importance attaching to these records.[10] He has shown there that the eight label-like little tablets, measuring from about two and a half to four inches in length and about half an inch in width, as seen in Plate XXXI of his volume, were originally fastened to presents consisting of a jewel which members of the local royal family made to each other, or received from their subjects, perhaps on the occasion of the New Year.

Records of presents to royal persons.

On one side of the label the donor inscribed his name and the mention of his present and good wishes. On the other appears the name or title of the recipient. In one case it is the mother of the king who presents her gift and salutations to her son; in another the wife of the hereditary prince sends them to one of the king's wives, etc. Presentations are recorded from certain personages to the princess Chʻun, to the younger hereditary prince, etc.

A princess of *Chü-mo* (Charchan) mentioned.

Most of the 'royal' personages and the donors are designated by name. But there seems little hope of their ever being identified from Chinese historical records, seeing that they must have belonged to the family of a small local ruler, not likely to figure in such notices as the extant Annals intermittently present of the states of the 'Western Regions'. Nor do the labels give the name of the territory over which the head of this royal family ruled, and of which this site evidently was the chief place. But it is an interesting indication that in N. xiv. iii. 10 one of the king's wives

[10] See *Documents*, pp. 198 sqq.

is described as 'the princess of Chü-mo 且末', the territory which corresponds to the present Charchan, some ten marches to the east on the route to Lop-nōr.[11]

Identification of Niya Site with *Ching-chüeh.*

Now this definite mention of Chü-mo or Charchan as a territory with which the ruler of the ancient oasis represented by the Niya Site stood in close relation, necessarily forces the question as to the identity of his own 'kingdom' upon our attention. Since it is clearly proved by these little tablets that the ancient oasis possessed its own ruling family, I do not hesitate to identify the site as the chief place of the territory of Ching-chüeh 精絶 which the Chinese historical records from Han to T'ang times place to the west of Chü-mo.[12] In the Former Han Annals 'the kingdom of Ching-chüeh' is described as situated to the west of Chü-mo at a distance of two thousand li.[13] Its western neighbour was the kingdom of Yü-mi 扜彌 at a distance of 460 li. Since the latter territory must certainly be identified with the Chīra-Keriya tract,[14] we are thus led to place Ching-chüeh on the Niya River in spite of the greatly exaggerated distance indicated between Chü-mo and Ching-chüeh.[15] The capital of the kingdom is named 'the city of Ching-chüeh'. But the limited size of the 'kingdom' is sufficiently proved by the estimates of its population, '480 families, comprising 3,360 persons, with 500 trained troops.'

Ching-chüeh in Chinese historical records.

No details are given about Ching-chüeh by the Later Han Annals, which merely mention it along with Shan-shan and Chü-mo on the route from Yü-mên to Khotan.[16] Ching-chüeh figures similarly in the list of territories which the *Wei lio*, composed between A.D. 239–65, enumerates along the 'southern route' leading westwards from Lop-nōr to Khotan.[17] But here we have in addition the distinct statement that Ching-chüeh along with Chü-mo and Hsiao-wan, another small territory which lay to the south of Chü-mo and evidently corresponds to the hill settlements between Kapa and Achchan, was dependent upon Shan-shan or Lou-lan, the territory adjoining Lop-nōr. The statement has its special interest for the identification of Ching-chüeh with the territory of which the Niya Site may be assumed to have been the chief place. On the one hand, it dates from the period immediately preceding the time when we assume the site to have been abandoned. On the other, it helps to explain why among the Chinese documents excavated in 1901 there was the cover, N. xv. 345,[18] of an edict emanating from the 'king of Shan-shan', and why the records of N. xxiv discussed below include two covers bearing the seal-impression of the commander of Shan-shan.[19]

Ching-chüeh in T'ang Annals.

Ching-chüeh figures still in the T'ang Annals as the name of a 'little kingdom' to the east of

[11] Cf. Chavannes, *T'oung-pao*, vi. (1905), p. 536; *Voyage de Song Yun*, p. 13, note 1; *Ancient Khotan*, i. p. 435; below, chap. viii, sec. i.

[12] The priority of having correctly surmised this location of Ching-chüeh belongs to M. Grenard. The references made to the point in the text of his publication on the *Mission Dutreuil de Rhins*, ii. pp. 14, 61; iii. pp. 147 sqq., are based partly on a delusive resemblance between the name *Kin-kiue*, as he spells Ching-chüeh, and the variant Kenk كنك, in which the name Ketek كتك, applied by popular tradition to widely distant old sites in the Tārīm Basin, presents itself in Muhammadan legends. But he was right in looking for Kin-kiue (Ching-chüeh) to the north of Imām Ja'far Sādiq, where he and M. Dutreuil de Rhins had heard of, but not actually visited, an 'old town', i. e. the ruins of the Niya Site, first explored by me ten years later. Also Herrmann, *Seidenstrassen*, i. pp. 92, 98 sq., was right in accepting this location.

[13] See Wylie in *J. Anthrop. Inst.*, x. p. 26; Chavannes, in *T'oung-pao*, vi. (1905), p. 536, note 3.

[14] See *Ancient Khotan*, i. p. 467. The question is not materially effected by the calculations on varying distance estimates of the Han and T'ang Annals which lead Dr. Herrmann (*Seidenstrassen*, i. p. 96 sqq.) to postulate for the capital of Yü-mi a position to the north-east of Farhād Bēg-Yailiki, even without archaeological evidence, and to deduce from this conjectural location a more westerly course of the Keriya River.

[15] This instance of a very serious error in the road records handed down in the Former Han Annals ought to be an emphatic warning against too great reliance on such Chinese measurements when investigating difficult points of ancient Central-Asian geography.

[16] Cf. Chavannes, *T'oung-pao*, 1907, p. 170.

[17] Cf. *ibid.*, 1905, p. 537.

[18] See *Ancient Khotan*, i. pp. 361, 371.

[19] See below, chap. vi, sec. iii.

Khotan.[20] But it is certain that the ancient site representing its capital during Han and Chin times must by then have been abandoned for centuries. We have also seen that Hsüan-tsang knew the town which he passed in a corresponding position on the Niya River, a few years before T'ang rule was extended to the Tārīm Basin, by the name of *Ni-jang*, identical with the present *Niya*, and that it served then as the frontier station of the Khotan kingdom.[21] Hence it seems safe to assume that Ching-chüeh in the T'ang Annals is merely an archaic designation for what is now the Niya Oasis. With this the distance of seven hundred li to the east of Khotan there indicated agrees remarkably well, seven daily marches being still the usual reckoning between Khotan and Niya.[22]

Position of 'royal' residence.

The presence of these Chinese tablets in the dustbin of N. XIV. iii, can readily be accounted for only on the assumption that the local chief's residence had stood near this great refuse deposit. Was it from the large hall, N. XIV. i, adjoining that these quaint relics of a royalty as yet unrecorded had found their way into the dustbin? Or did this hall, before it was covered up by stable refuse, belong to a more imposing structure of an earlier period which had disappeared without leaving a trace on the surface, even before the site was abandoned towards the end of the third century A.D.? Had I known at the time the significance of these little Chinese tablets, I should certainly have endeavoured to give an answer to these questions by excavating below the ground level of the ruins N. XIV. i, ii, and by any other practicable operations.

Difference of levels.

The evidence otherwise available does not suffice for a definite answer, but yet merits careful record. In the first place the fact must once more be noted that the floor of the boarded enclosure, in which the tablets and other 'sweepings' of archaeological interest were found, lay fully seven feet below the ground level occupied by the ruins and eroded remains of timber and plaster walls which the plan (Plate 9) shows along the north-east and north-west sides of the refuse deposits. This difference of levels is readily explicable only in two ways. Either there had originally been a natural depression by the side of the buildings which we may presume to have been part of the royal residence, and this was suitably utilized as a place for stabling and depositing refuse until the surface level rose to that of the adjoining ground westwards. Then it may have been built over by some structure to which the walls referred to belonged. Or else we should have to assume that the ground level was originally the same, both at the area occupied by i and ii, and at that of the refuse heap iii, and that just as at the latter the level had gradually risen by successive rubbish deposits, so it had been raised at the former, too, as the result of long-continued occupation by periodically renewed buildings. Which of these two assumptions is more likely I am unable to decide now. But it is noteworthy that in the south-western portion of the refuse heap I came upon what looked like remains of an encircling wall built of sun-dried bricks, about three feet thick. Amidst its débris there lay pieces of clay which seemed to have been fired accidentally. These remains were found well above the natural ground, resting between refuse layers both below and above.

Question of earlier origin of Chinese labels.

There remains thus the possibility open that the miscellaneous articles found within the boarded enclosure and mostly in its lower portion may date from a time not inconsiderably earlier than the period immediately preceding the abandonment of the site. This justifies a closer scrutiny of these articles with a view to any chronological indications they may, perhaps, furnish. Looking at the Chinese tablets in the first place, I cannot help being struck by the difference their writing presents

[20] See Chavannes, *Turcs occid.*, p. 127.

[21] Cf. *Ancient Khotan*, i. p. 311; above, p. 212.

[22] The difference between this T'ang estimate of 700 li and that of 850 li in the Former Han Annals (see Wylie in *J. Anthrop. Inst.* x. p. 29; Herrmann, *Seidenstrassen*, i. p. 96) deserves notice. It is fully accounted for by the fact that the direct distance from Khotan to the Niya Site (the Ching-chüeh of Han times) is distinctly greater than that from Khotan to the Niya oasis. In addition it must be remembered that the direct route to the former between the Keriya and Niya Rivers crosses what already in ancient times must have been a troublesome belt of sandy desert, whereas the modern route to Niya avoids this and after Keriya passes only over far easier gravel desert.

to that of the Chinese records on wood brought to light in 1901 from the rubbish heap N. xv at this site.[23] Speaking without any knowledge of Chinese palaeography I must own to the impression that the general style of the characters in these beautifully penned labels of N. xiv. iii approaches more closely to the ductus observed in the documents of Former and Later Han times which I discovered along the Tun-huang Limes, than to that shown by the records of the Chin dynasties' epoch among my finds at the Niya and 'Lou-lan' Sites.[24] But it must remain for competent Sinologists to decide whether this impression is right, and if so, whether this resemblance is not due, perhaps, more to archaic tendencies of calligraphy than to proximity in time.

Minor finds in ancient dustbin.

As to the other small relics which have survived in this dustbin, several among them present points of special interest. It is true, we can scarcely hope ever to obtain a sufficiently close knowledge of the development of ancient weaving industries in Central Asia and China to derive chronological indications from the manifold fragments of fabrics in silk, wool, and felt which the Descriptive List below shows (see N. xiv. iii. 001, 003, 007). But the total absence of cotton among these materials, as far as Dr. Hanausek's analysis of characteristic specimens shows, is noteworthy. The conical head-gear, N. xiv. 004, in carefully gored yellow felt is curious on account of its Phrygian cap-like shape. The two arrowheads in bronze and iron, N. xiv. 008; iii. 0032 (Plate XXIX), do not differ materially in shape from those found elsewhere at this or the 'Lou-lan' Site. The small bronze plates, N. xiv. 009–0011 (Plate XXIX), which look as if they had belonged to scale armour, are certainly peculiar, but were found on eroded ground near N. xiv. iii, not in the dustbin itself. The chopsticks, N. xiv. iii. 0020, 0021, imply Chinese customs of eating, and the lacquered ones are, like the piece of a fine lacquered frame, N. xiv. iii. 0025, probably of Chinese origin. The carefully worked ornamental button-edging in leather, N. xiv. iii. 0033 (Plate XXIX), and the pendant or button in paste inlay with elaborate design, N. xiv. iii. 0035 (Plate XXIX), attest the use of elegant apparel by those who resided close by. Furniture is represented by the two well-designed chair-legs in turned wood, N. xiv. iii. 0036, 0037. Small but of distinct interest are the two morticed wooden pieces, N. xiv. iii. 0010, 0017 (Plate XXVIII), which after the analogy of numerous similar finds from the Tun-huang Limes have been described as seal-cases. Their real use is not quite certain. But in any case it deserves attention that, abundant as finds of small objects in wood serving stationery purposes have been both at the sites of Niya and 'Lou-lan', yet the only analogous pieces have come to light from the remains of those old watch-stations of Han times in the Tun-huang desert.[25]

Excavation of ruins southward.

Even before the clearing of the refuse layers of N. xiv. iii was completed, the number of available men had enabled me to commence the excavation of the chain of smaller ruins stretching south, Naik Rām Singh supervising. When I was able to bring the whole of the men to this task the progress made was rapid. Some of the dwellings had suffered much from erosion, and within their broken walls but little sand had accumulated. Others had been better protected, and it cost great efforts to clear the high sand which filled their rooms, in one or two instances to the very ceiling. But the men wielded their Ketmans with remarkable perseverance, in spite of the trouble caused by the necessarily limited water rations, and the encouragement of small rewards paid for the first finds of interest in each structure sufficed to keep them hard at work for ten or eleven hours daily.

Finds in ruins N. xv–xvii.

At a group of much-eroded dwellings of small size, about half a mile to the south of N. xiv, the ruin first cleared, N. xv (see plan in Plate 10), yielded some well-preserved Kharoṣṭhī tablets of varying shapes as well as two stick-like implements, probably used in weaving, and a much-fissured double-bracket in wood, as shown by the photograph in Fig. 52, over five feet long. The rather

[23] See *Ancient Khotan*, i. p. 358; ii. Pl. CXII–CXIV.

[24] Cf. for Han documents Chavannes, *Documents*, Pl. I–XIX; for documents from 'Lou-lan', *ibid.*, Pl. XXII–XXX.

[25] Cf. T. VIII. 5; XII. 002 in Descriptive List below; also Pl. LIII.

coarsely designed carving of the under-surface showed the four petalled flower of Gandhāra origin, along with simpler patterns. In the scanty remains of N. XVI (see plan in Plate 11), the extant walls were constructed of rushes and plaster, and the only find to be noticed was a bent stick which may have served as a fixed shoemaker's measure (N. XVI. i. 002; see Plate XXVIII). The ruin N. XVII had suffered so badly through erosion that only a single small room, with a sitting platform, could be traced, the solitary find being a wedge-shaped tablet with a column of Kharoṣṭhī writing at its square end. This probably had been earlier the under-tablet of a double-wedge which had been scraped down to be used again for a memorandum.

Ruin N. XVIII.

In another small group of dwellings, situated over a mile to the east-south-east, the ruin N. XVIII (see plan in Plate 11) was of fairly large size but completely eroded. Apart from the rectangular covering-tablet of a Kharoṣṭhī document there was found here a large wooden eating-tray, about thirty-two inches by fifteen inches, raised to a height of six inches by short legs (seen in background of the photograph, Fig. 52). A curious object here recovered was a flat wooden stamp, N. XVIII. 001 (see Plate XIX), showing on its face the rude design of a cow. Its use remains doubtful. About fifty yards to the south-east there were clear remains of an orchard, with several trunks in a row of dead mulberry-trees still rising to heights varying from ten to twelve feet (see Fig. 51). Evidently a dune had offered them protection for centuries and thus saved them.

Excavation of ruin N. XIX.

N. XIX was a dwelling about a quarter of a mile to the east of N. XVIII, covered by sand to a height of two to five feet. The photograph in Fig. 50 shows its eastern part as it looked before excavation, and its plan is seen in Plate 8. It consisted of two separate sets of rooms separated by a small fenced orchard, the trees of which, mainly mulberry, were lying as prostrate trunks in the sand. Most of the walls were constructed in timber and plaster, with diagonal tamarisk matting as a core. In the western set room i yielded the under-tablet of a wedge document in Kharoṣṭhī and room ii an intact jar, twenty-one inches high, nineteen across at its widest and six inches in diameter at its mouth (see Fig. 52). From the passage, iii, of the eastern set there emerged three label-shaped tablets; part of a bowl decorated in red and black lacquer; two boot-lasts of different sizes (N. XIX. 001, 002; see Plate XIX) and a small wooden implement (N. XIX. 003, see Plate XXVIII) which might possibly have served as a handle for the thong of a fire-drill or as a 'dead-eye' for a rope. In the largest room, N. XIX. iv, the two well-preserved door-jambs showed decorative carving of the pattern now known in the Punjab as *jaudāna* (see inset in Plate 8). Two small structures to the east and south of N. XIX, at thirty and ten yards' distance respectively, proved completely eroded, the only remains left being the posts which rose above the low sand dunes. To the south of the first a row of big poplars (Tereks) still stood upright at regular intervals.

R. S. Rām Singh's reconnaissance.

After clearing N. XIX I marched on the evening of October 21 across the dunes eastwards in order to examine the large ruin, the posts of which rising above the dunes had attracted notice from a distance. It proved, as expected, the ancient residence, N. VIII, already excavated in 1901. The condition of the sands overlying and surrounding it and the adjacent ruins seemed to have changed very little. While there I was rejoined by Surveyor Rām Singh and learned with some dismay that the guidance of Islām Ākhūn, the Niya villager who had offered to show some ruins newly discovered away to the east, had completely failed. He persisted in moving northward, in manifest contradiction to his previous statements, and when no ruins of any sort were sighted after a long and trying day's march, confessed to having lost his bearings. On the next day Islām Ākhūn endeavoured to pick up some guiding points by steering south-eastwards. But his confusion becoming more and more manifest, the Surveyor thought it prudent to head again for my camp before the camels, which showed signs of exhaustion, broke down. In spite of various détours and the growing height of the dunes, Rām Singh had reached a point fully thirteen miles farther north in

a straight line than my northernmost camp of 1901. His testimony as to the complete absence of ancient structural remains in that direction was all the more important, because I could rely on his accuracy and keen eyesight. He had found all ground covered with dunes, generally ten to fifteen feet in height, and had noticed pottery débris only at one patch of eroded soil, about a mile or so beyond N. VIII. Curiously enough he had found a small group of Toghraks still living beyond the high ridge of sand reached on his reconnaissance of 1901.

Search for ruins eastwards.

It was evident that either Islām Ākhūn, like his namesake, the Khotan forger unmasked at the close of my first explorations, had indulged in romancing, or his topographical memory was defective. Yet his statement as to the ruins to the east of those previously explored by me could not be left untested merely because he had chosen a wrong bearing by mistake—or otherwise. So next morning Ibrāhīm 'the miller', with Sāduk Ākhūn, the intelligent shepherd from the Mazār, and another enterprising companion, was sent out to reconnoitre independently eastwards. I had heard more than once of cases when men, shiftless and often enfeebled by opium, whom the hope of finding 'treasure' tempted to old sites in the desert, had lost their lives by mistaking the direction which might have guided them back to safety after their scanty store of water was exhausted. Perhaps this had been the fate of the man whose skeleton I came upon, about halfway between N. XIX and VIII, stretched out on the sand. It was lying face downwards on a low dune, with no remains whatever near by. The preservation of most of the bones showed that it could not have been exposed to erosion for a protracted period. This discovery was not without its use to me; for it first induced Ibrāhīm to mention to me the cemetery, or 'Mazār' he thought, which he had come upon in the course of his last wanderings at a point to the south-east of N. XIX. About this more further on.

Clearing of ruin N. XX.

October 22 was mainly occupied by the clearing of N. XX, a relatively large house, of which Plate 12 shows the ground-plan and Fig. 53 the appearance before excavation. The complex of its rooms extended over ninety feet from north to south, and sand filled them up to seven feet in height. Whereas the east side of the building had suffered from erosion the vicinity of a dune had protected the south-west portion and, in fact, prevented its complete excavation within the time I was able to afford. Room ii was filled completely with sand up to its roofing, which was six feet seven inches above the floor and made of short rafters with brushwood layers above, the whole resting on a rough longitudinal beam. The room, i, adjoining eastwards must have served for a kitchen. It is seen in the foreground of the photograph (Fig. 48). Here two big jars were found, one complete measuring three feet in diameter where widest, with a height of two feet eight inches and a mouth ten inches across. This jar had been cracked while in use and was found enclosed in a rope netting to secure it. Two branching posts in a recess of the same room served for trivets. The walls in this northern portion of the house were constructed either of timber and plaster with diagonal tamarisk matting or of vertical rush bundles covered with plaster.

Constructive features of N. XX.

The apartments in the southern part of the house (see photograph, Fig. 54) were more carefully built, and the central posts of the framework showed their roof to have had a height of about eight feet. An inset in the plan (Plate 12) shows the constructive details of the timber and wattle framework in the east wall of room iii. In the other walls of this room and of the small apartment, iv, the wattle consisted of horizontal reed bundles fixed to the posts of the framework. The wall plaster of these two rooms was of unusual hardness and retained a pink colour-wash. Near the north door of iii a graffito showed the outlines of a hand with the five fingers spread out. Two low doors in carefully fitted wooden frames, with jambs slightly slanting, opened from iii into rooms which could not be cleared owing to the height of the dune overlying them. One of these doors, with its lintel five feet above the floor, and another to the south were approached across the sitting platform of the room, an unusual arrangement. In the small apartment, iv, a small slip-shaped

tablet came to light, the only other find being a lignite seal discovered in one of the northern rooms (see N. xx. 001, Plate XXIX).

Ruin N. xxi.

N. xxi was the ruin of a small dwelling about half-way between N. xviii and N. xx, and was eroded down to a level of some six inches from the plastered floor. Only two rooms, about ten feet square each, were traceable on the little plateau created by wind erosion. Just under the sitting platform of the northern room lay a human skull, and bones of the same skeleton strewed the slope below. Were these the remains of another hapless 'treasure-seeker'? A small oblong Kharoṣṭhī tablet, the decorated neck and handle of a large hand-made pottery vessel (N. xxi. 001; see Plate XXXVI), and the bottom of a lacquered wooden bowl, still retaining the rivets of some ancient repairs, were the only finds here.

Finds in N. xxii.

The southernmost ruin of this group was N. xxii, situated about a quarter of a mile from N. xx and N. xxi. The rooms traceable formed a suite running north to south (see plan, Plate 13), and their clearing was made difficult by the presence of a dune, about thirteen feet high, which adjoined and partly overlay them on the east. The excavation of them cost nearly the whole of October 23, but was rewarded by a good yield of Kharoṣṭhī documents on wood. In the small northernmost room, i, with walls of rushes and plaster, there were found seven tablets, mostly of oblong shape; a heavy wooden comb as used by weavers (N. xxii. i. 001; see Plate XXVIII); and a quaint little doll, N. xxii. i. 002, carved in wood with hinged legs and dressed up in gay silks. From the adjoining small apartment, ii, two oblong tablets were recovered. Much more abundant were the Kharoṣṭhī documents on wood which came to light in room iii, measuring twenty-one by eighteen feet and filled with sand to a height of over seven feet. Most of the twenty-three tablets were of the wedge type, three of them being complete double-wedges. On one of these, N. xxii. iii. 18, the obverse of the covering-tablet still retained in perfect preservation the clay impression of a seal, familiar to me already from my excavations of 1901, showing Pallas Athene with aegis and thunderbolt.[26] Another but poor impression of the same seal appears on the covering-tablet N. xxii. iii. 16. All the tablets were found sticking to the floor and were encrusted with dirt, a sign that they had been thrown down there while the room was still inhabited.

Among the miscellaneous objects found, a large cupboard, raised on high and curiously carved legs, was, perhaps, the most interesting. It is reproduced in Plate 11 from a drawing to scale made by Naik Rām Singh. It no doubt served, like the present *nān-sandūk* of Turkestān villagers, for the safe storage of food articles, and the peculiar carving of the legs was manifestly intended to render access impossible for small rodents. A cupboard closely resembling this in size and shape is seen in the photograph of N. xxvi (Fig. 57).[27] To the north of the house a rush fence lined by a row of dead poplars mostly fallen could be traced for a distance of 105 feet up to where it disappeared under a dune. A short distance to the south the outlines of an ancient tank could still clearly be recognized within the oblong enclosure, about thirty-six by twenty-eight feet, formed by rows of large poplars (see Fig. 55). The big sand-cone, more than forty-two feet high, seen in the photograph by the side of the tank, was one of the very last in this direction still retaining living tamarisk growth.

Section III.—RECORDS FROM A HIDDEN ARCHIVE, N. XXIV

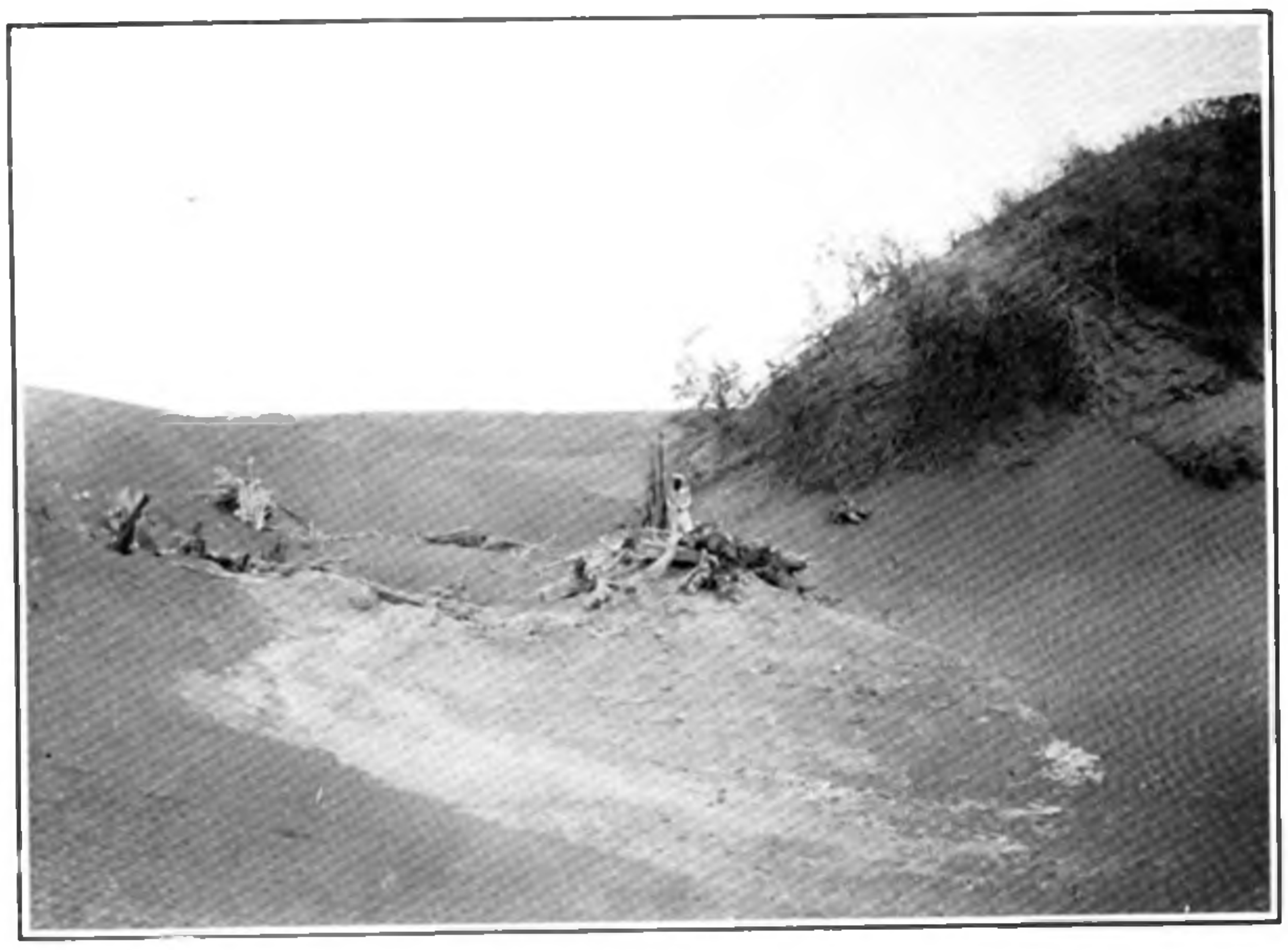
By the evening of October 24 my camp was shifted to a small group of ruins which in 1901 I had discovered only at the very close of my visit, too late for systematic exploration, and which had ever since made me wish for a return to the site. Its dwellings lay close together on the

[26] Cf. *Ancient Khotan*, i. p. 354; ii. Pl. LXXI.

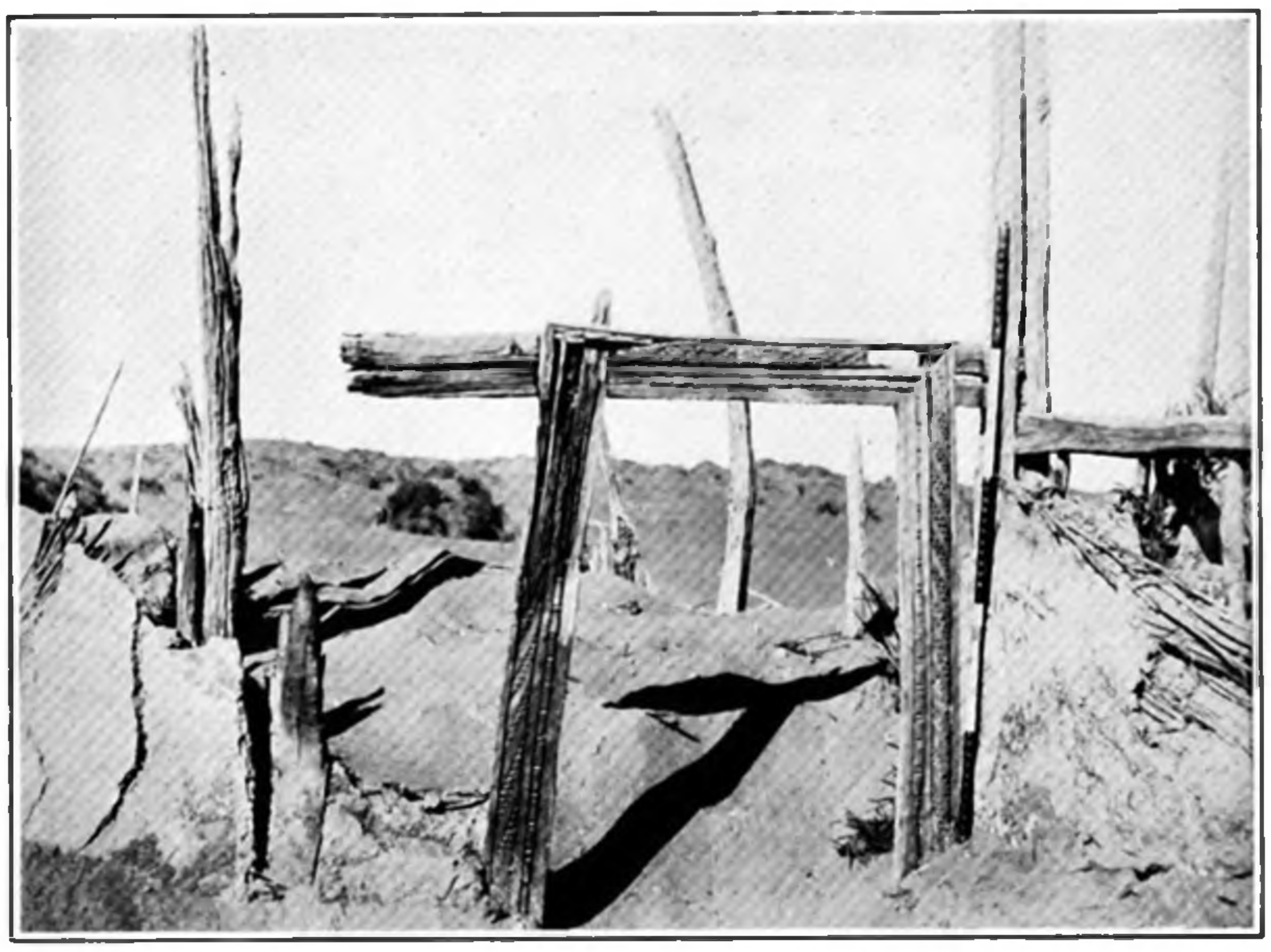
[27] For similar cupboards found in 1901 at this site, cf. *Ancient Khotan*, i. pp. 377, 379.

53. RUINED DWELLING N. XX, NIYA SITE, SEEN FROM SOUTH, BEFORE EXCAVATION.

54. ROOMS iii, iv OF RUIN N. XX, NIYA SITE, SEEN FROM EAST, AFTER EXCAVATION.



55. REMAINS OF ANCIENT TANK TO SOUTH OF RUIN N. XXII, NIYA SITE.



56. ORNAMENTED WOODEN DOOR FRAME FROM RUINED HOUSE, N. XII, NIYA SITE.

57. ANCIENT CUPBOARD EXCAVATED IN ROOM viii OF RUINED HOUSE, N. XXVI.

58. ROOM viii OF RUINED RESIDENCE N. XXIV, IN COURSE OF EXCAVATION.

The measuring-rod marks batch of Kharoṣṭhī tablets emerging from sand.

59. RUIN OF ANCIENT RESIDENCE, N. XXIV, NIYA SITE, AFTER PARTIAL EXCAVATION, SEEN FROM REMAINS OF DEAD ARBOUR ON EAST.

60. WESTERN ROOMS OF ANCIENT HOUSE, N. XXVI, NIYA SITE, IN COURSE OF EXCAVATION.
On left in foreground guest room ix, with fire-place; on right anteroom vii giving access to family quarters.

extreme western edge of what had then appeared to be the central portion of the ancient oasis. Only one of them, N. XII, the westernmost of the group, could be cleared then, and that not quite completely, no 'finds' rewarding the labour.

Clearing of eroded dwelling, N. XXIII.

Our work on the morning of October 24 began in a very promising fashion at the badly eroded remains of a house, situated about one-third of a mile to the south-east of N. XII (see plan, Plate 13). The three rooms still traceable with their timber and plaster walls were covered nowhere by more than a foot of drift sand. But this had sufficed to save over thirty wooden documents, though on some the Kharoṣṭhī writing had suffered badly by exposure. Rectangular and wedge-shaped tablets prevailed, and on one of the latter, N. XXIII. ii. 8, there survived a clay impression from the same classical seal which I had first encountered on tablets excavated at N. XIII.[1] Among the miscellaneous antiques found there may be mentioned a curious piece of superior basket work, N. XXIII. 003, apparently of bamboo, and of Chinese origin; a band of 'green' leather, N. XXIII. 001, once lacquered and probably belonging to scale armour; an incised wooden stamp, N. XXIII. 002 (Plate XIX); and an oval, trough-shaped piece of horn, N. XXIII. ii. 005, which may well have served as an inkstand. The close resemblance in the make and decoration of the lacquered bowl fragment N. XXIII. i. 001 to a piece found at a station on the ancient Limes west of Tun-huang suggests Chinese manufacture for all such lacquered ware. The fence enclosing the courtyard had withstood erosion far better than the ruined dwelling itself, and could be traced for upwards of 130 feet in one stretch from south-east to north-west with adjoining extensions. The big poplars once lining it lay as dead trunks stretched out in a row, while to the south dead fruit-trees strewed the ground marking an orchard.

Excavation of residence N. XXIV.

From here I turned my diggers to the large ruined residence, N. XXIV, situated about a quarter of a mile to the north of N. XXIII and nearest to N. XII, with which my excavations of 1901 had concluded. Its remains, shown by the photograph (Fig. 59) in the course of excavation, occupied a small plateau which ground eroded to a depth of about sixteen feet surrounded on all sides except on the south. The plan reproduced in Plate 14 shows the arrangement of the numerous apartments, of which the walls, mostly built in timber and plaster, still stood some height above ground or were otherwise traceable. But that this residence was once even larger was shown by the débris of timber strewing the slopes of the extant plateau to the north and east. Here on the east were found also the dead trunks of poplars, some still upright as in Fig. 59, which must have belonged to rows adjoining a courtyard or garden. It will be seen from the plan that, while the living-rooms occupied the centre and east side, the outhouse and stables lay westwards.

Finds in rooms i–iv.

On commencing systematic clearing from the north in what remained of room i we came first upon some badly bleached and warped tablets which had lost all their writing. The room adjoining it in the north-east corner had already been cleared in the course of my hurried examination of 1901, when the only find was a large jar, nearly three feet in diameter and let into the floor.[2] From rooms ii and iii came some tablets in better condition, two still showing traces of their Kharoṣṭhī writing. The inner room, iv, was provided with plastered sitting platforms on three sides, after a fashion which, as the plan of a modern residence at Bāgh-jigda, reproduced in Plate 12, shows, still survives to this day in timber- and plaster-built houses of well-to-do people in this region. Some of the posts of the wall framework which retained their original height proved that the ceiling had been about eight feet from the floor. Two large beams, twenty-two feet long, had once supported the ceiling and now lay stretched out on the sand which covered this room to a height of four to five feet. To judge from the massive nature of these beams it seems possible that they were

[1] See above, p. 216.

[2] Cf. *Ancient Khotan*, i. p. 380.

meant to support an upper floor. Here were found a double-wedge tablet, N. xxiv. iv. 2, in perfect condition, unopened and still retaining its clay seal; a well-preserved double-bracket, N. xxiv. iv. 002 (see Plate XVIII), showing carefully executed wood-carving in Gandhāra style; also some pieces of turned woodwork seen in the foreground of the photograph, Fig. 62. Of household furniture there are seen also here a large oblong eating-tray, broken, and a wooden cupboard of the type already described. The use of a net, made of the strong fibre rope which is still known at the present day under the name of *kōshu*, remains doubtful. The walls of this room showed a core of horizontal reeds within their solid plaster. The central pillar once supporting the ceiling had a thickness of one and a half feet; from a height of about three feet above the floor its wood was completely bleached and fissured by exposure.

Arrangements of rooms.

The size of this room and of another to the south, vii, measuring twenty-five by nineteen feet, together with other indications, proved that the house must have been that of a well-to-do person. That he had been an official of some consequence was suggested by the fact that two long and narrow apartments, v and vi, to the east of these halls and manifestly intended only as passages or ante-rooms, yielded finds of well-preserved Kharoṣṭhī tablets of respectable size, including an oblong board, N. xxiv. vi. 1, nearly three feet in length (see Plate XXV) on both sides of which was writing by different hands suggestive of drafts or office memoranda. As an interesting constructive feature, subsequently met with also in N. xxvi (see Figs. 62, 63), it may be mentioned that the passage, vi, communicated with the inner hall vii, not only by a door, but also by two wide panelled windows, of which the inset in Plate 14 shows the elevation. It is probable that these windows, like their exact pendants still to be found in the larger modern houses of the Khotan region, were originally closed with lattice-work.

Kharoṣṭhī tablets from office room, N. xxiv. viii.

The previous finds of inscribed tablets in this house, scattered as they were, had raised the hope of finding more in what might prove the owner's office room. This hope was soon justified when the clearing reached room viii, adjoining the main hall on the south and measuring about twenty-six by twelve and a half feet. The photographs, Figs. 61, 62, show parts of it in the foreground. As soon as the excavation proceeding from the east side of the room had reached a point about three feet from the south-east corner of vii, tablets emerged in rapid succession from the sand lying against the north wall of the room. They lay close together, loose, and without any order, from the plastered floor to about one foot above it, just as if files or bundles of these wooden documents had been thrown down haphazard. In the photograph, Fig. 58, a batch of these tablets is seen cropping out from the sand. The total number of pieces recovered here within a few square feet rose soon to fifty-four.

The majority of these are wedge tablets, two of them quite complete, and as detached covering- and under-tablets are represented among them in approximately equal numbers, it is probable that closer examination will lead to the fitting together of more double-wedges. There was found here only a single rectangular document, the under-tablet N. xxiv. viii. 44 b. The remaining twenty-three tablets belonged to that miscellaneous class of records for which in *Ancient Khotan* I adopted the general designation of 'oblong tablets'.[3] The frequency of columnar arrangement in the writing showed that the contents were probably accounts, lists, and miscellaneous 'office papers', to use an anachronism. An almost general and very gratifying feature of the records was their excellent state of preservation, without injury from damp or erosion. Evidently we had hit upon files from some official's *daftar*, thrown down and soon covered by loose drift sand, which ever since had offered them full protection. After this heap had been safely extracted, a careful search in other

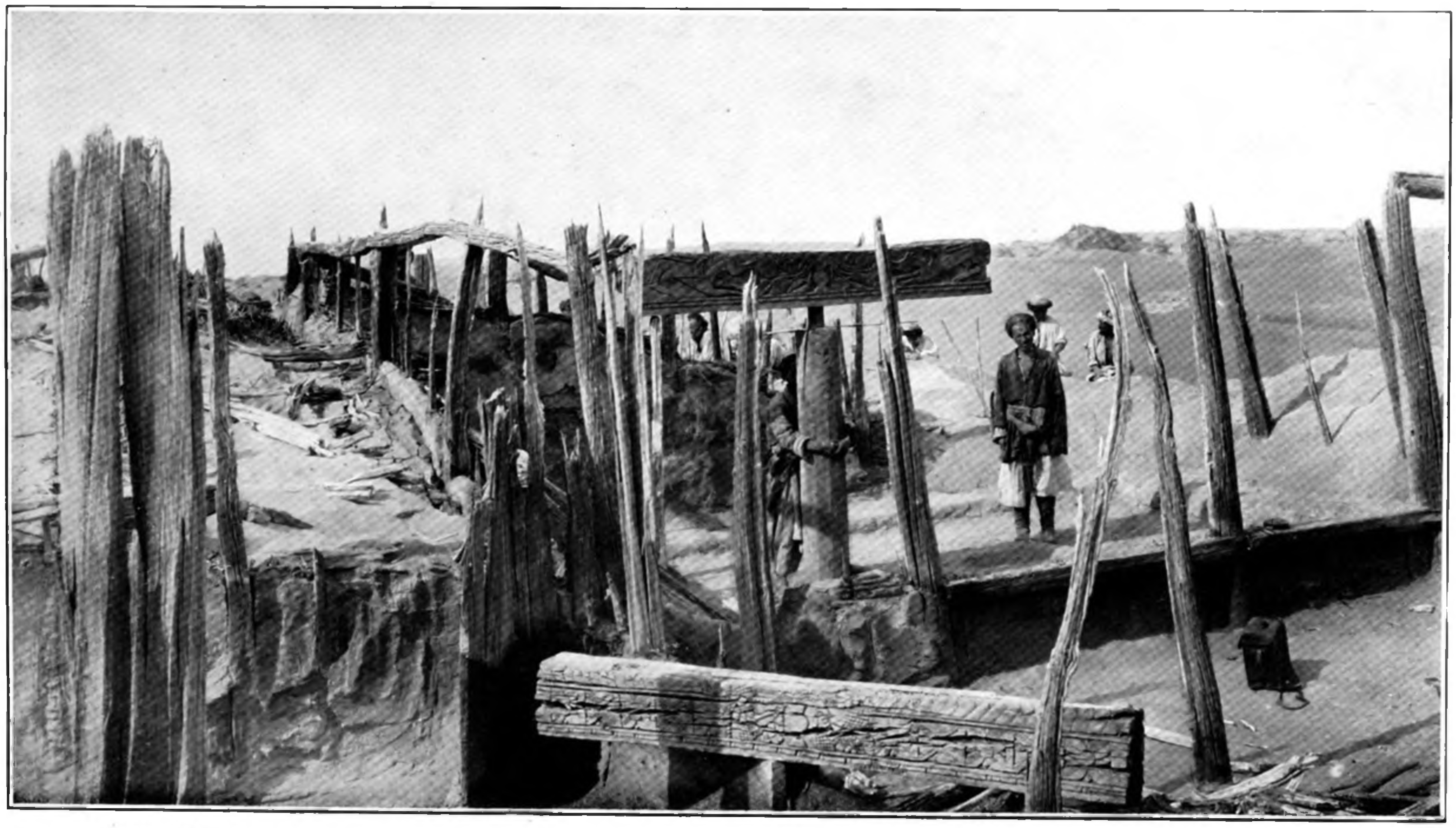
[3] Cf. *Ancient Khotan*, i. pp. 323 sq.

A

61. CENTRAL HALL, vii, AND OFFICE ROOM, viii, IN RUIN N. XXIV, NIYA SITE, AFTER EXCAVATION.
A marks spot where hidden archive was discovered below floor.

62. CENTRAL HALL, vii, OF RUINED RESIDENCE N. XXIV, SEEN FROM SOUTH-EAST.
On right in foreground panelled window opening from hall into passage vi.

63. HALL iii OF RUINED HOUSE N. XXVI, NIYA SITE, AFTER EXCAVATION, WITH DECORATED DOUBLE BRACKET IN WOOD, RAISED ON PILLAR.



64. HALL iii OF RUIN N. XXVI, NIYA SITE, AFTER EXCAVATION, WITH DOUBLE WINDOW OPENING INTO PASSAGE iv.

parts of the room brought to light five more tablets, N. xxiv. viii. 65–9. These emerged from the top of the mud flooring, having been thrown into corners and below the walls, probably some time before the abandonment. Their thickly encrusted condition was a result of contact with plastered surfaces.

Discovery of cache of Kharoṣṭhī documents.

The scraping of the floor was still proceeding when a strange discovery rewarded honest Rustam, whom, as the most experienced and reliable of my old diggers of 1901, I was employing on this search. Already during the first clearing I had noticed a large lump of clay or plaster, looking like a fragment from a broken wall, lying close to the north wall of the room where the tablets had turned up in packets. At the time I thought little of its presence there, but had ordered it to be left undisturbed. Now when Rustam extracted between it and the wall the well-preserved wedge covering-tablet, N. xxiv. viii. 70, I could not prevent its removal. As soon as this had been effected, I saw him eagerly burrow with his hands into the floor thus laid bare, and, before I could put any question, triumphantly draw forth, from a hole dug less than six inches deep, the complete rectangular tablet N. xxiv. viii. 71, with its clay seal intact and the envelope still secured by the original string fastening. Rustam's fingers now worked with the sudden energy of the successful 'treasure-seeker' at enlarging the hole, and soon I could see that the space towards the wall and below the foundation beam of the latter was filled with closely packed layers of similar wooden documents. The photograph, Fig. 61, shows the spot of the deposit, a little to the right of the measuring-rod, just as it looked before the work of extraction was completed next morning.

Clearing of hidden archive.

There could be no doubt that we had come upon a small hidden archive, and I greeted this novel experience with keen satisfaction. Apart from the interest of the documents themselves and their remarkable state of preservation, the very conditions of their discovery were bound to afford valuable indications. The ground in front had first to be opened out to permit safe and orderly removal of the tablets. This was then commenced from the top layer and from west to east, the tablets being numbered accordingly. As one large rectangular double tablet after another was lifted out and cleared of the adhering dust layer, I noted with special satisfaction that with a few exceptions they all retained their string fastenings unopened and sealed down on the envelope in the original fashion. But darkness came on long before I could extract the whole of the records which lay exposed below the wall, and I had to be content with clearing that evening the tablets N. xxiv. viii. 71–86 only. In my Personal Narrative I have described the safeguards I adopted to preclude any possible interference with the remaining contents of the deposit during the night, and in the course of the following morning, October 25, I was able to remove these tablets too, N. xxiv. viii. 87–96, in perfect safety.

Complete rectangular tablets found unopened.

It was easy for me to realize the great value of the fresh materials which such a haul of perfectly preserved documents would furnish for the study of the language and the elucidation of the contents in these difficult Kharoṣṭhī records. But I also knew that years would pass before these materials could be fully utilized by philological research. I was, therefore, all the more gratified to find on the spot that they afforded manifest confirmation of a conjectural explanation I had arrived at in the case of a few previous finds of this kind. Of none of the rectangular tablets discovered on my previous journey were translations available at the time when I discussed the outer features, etc., of this important class of documents in my *Ancient Khotan*.[4] But the fact that no less than three of the complete rectangular tablets from N. xv were found unopened, along with some other considerations, led me then to suppose that these were deeds of agreement and the like which had to be kept under their original fastening in order that in case of need

[4] Cf. *Ancient Khotan*, i. pp. 353 sq.

their validity might be established in court. Since, as shown in that discussion, the clay seals were the only means used to authenticate this type of ancient Kharoṣṭhī document, it was obvious that the seal impressed in the centre of the covering-tablet, as well as the string passing under it and holding the under- and covering-tablets tightly together, had to be preserved intact if the text written on the inner surfaces was to be kept safe from any tampering and to retain its value as legal proof of the transaction recorded.

Explanation of tablets left unopened.

For the assumption thus arrived at years before, and not yet tested by the results of slowly progressing decipherment, I could scarcely have wished for better archaeological proof than that which the little archive discovered in N. XXIV. viii now furnished. Here was a large series of documents carefully hidden away as deeds, bonds, and similar legal instruments of value would be, when left behind in case of necessity, all of them on double rectangular tablets and the great majority of them still secured under their original sealings. What rapid examination of the writing I could spare time for then or later, seemed to show that the docket-like entries found here on the obverse of almost all the covering-tablets, above and below the seals, were not of the usual address style I knew from the envelopes of certain rectangular tablets, found on my former visit, which manifestly contained letters.[5] Thus the only question still open seemed to be: were these documents, hidden away with their seals and fastenings intact, deeds, or agreements which the official residing in the house had in safe keeping, or did they refer to land and property of his own?

Letters addressed to Cojhbo Soṃjaka.

The answer, I was well aware, could only be supplied by the complete decipherment and elucidation of these strangely recovered records. However, in the meantime it was encouraging to me to note that the very exceptions seemed to support my conjecture in its main outline. When late in the evening after the discovery I examined the two documents, N. XXIV. viii. 77, 88, which alone in the whole series had turned up open with the fastening completely severed, I found that both were letters addressed in due form to the 'great Cojhbo Soṃjaka', 'whose sight is dear to gods and men'. The name of the same officer had appeared in the addresses of many of the wedge covering-tablets, presumably belonging to letters with brief office orders, which had come to light in such numbers from the floor of the same room.[6] I wondered at the time what the contents of these two letters might have been to induce the last owner of the house, whether Cojhbo Soṃjaka himself or his heir, subordinate, or successor, to keep them along with what I assumed to be deeds, as 'papers' of value.

Condition of string fastenings.

Before I proceed to show how strikingly the results of actual decipherment have since confirmed the general conclusion reached on the spot and indicated in my Personal Narrative,[7] it will be convenient to record here the instructive data which the examination of the outer appearance alone of these documents can furnish. In the first place it is noteworthy that out of a total of twenty-six double rectangular tablets no less than eighteen were found still under their original sealed fastening and certainly unopened. Out of these thirteen, N. XXIV. viii. 71, 72, 74, 76, 78, 79, 81, 82, 83, 85, 91, 94, 95, still retained intact all of the six folds in which the string was passed through the grooves of the seal socket of the covering-tablet, and across the reverse of the under-tablet, in the regular fashion previously explained.[8] The reproductions of N. XXIV. viii. 85 in Plate XXI and of N. XXIV. viii. 71 in Plate XXIII fully illustrate this condition. In the other five documents, N. XXIV. viii. 80, 84, 89, 92, 93, one or more of the string folds were found broken,

[5] For a specimen of such rectangular covering-tablets with addresses, cf. N. XV. 154, *Ancient Khotan*, ii. Pl. XCVII.

[6] The name of Cojhbo Soṃjaka was familiar to me already from numerous documents in leather and wood found in 1901 at N. XV; cf. *Ancient Khotan*, i. p. 346, note 5.

[7] See *Desert Cathay*, i. pp. 282 sqq.; also *Geogr. Journal*, July, 1909, pp. 23 sq.

[8] Cf. *Ancient Khotan*, i. p. 352.

but one at least survived intact as sufficient proof that the double tablet had never been opened. Plate XXII showing the double rectangular tablet N. XXIV. viii. 80 before and after its opening at the British Museum will serve as an illustration. I was at first inclined to treat the broken state of one or more of the string folds by the side of others still intact as merely accidental, until its repeated occurrence in documents not showing the least trace of wear and tear suggested the possibility that it had some significance in this ancient official routine. We shall see presently that there is, perhaps, some textual support for this surmise.

Double rectangular tablets tied up after opening.

Among the remaining documents five, N. XXIV. viii. 73, 75, 86, 87, 90, showed the string folds at the back of the under-tablet no longer in their original position but obviously cut and tied up again in varying fashions. This operation was certainly facilitated by the fact that the string folds passing through each of the three seal socket grooves were always double, and that by cutting these folds on opposite sides in each pair the requisite lengths of string could readily be secured. Considering how ingeniously all technical details of fastening, etc., in this ancient wooden stationery were thought out and arranged,[9] it seems possible that the doubling of the string folds may have been partly designed for this very purpose. In addition there remained the end of the string which, as the reproductions in Plates XXIII (N. XXIV. viii. 71) and XXI (N. XXIV. viii. 85) show, was allowed to remain loose and of considerable length after the third double fold had been fixed. This was always available to help in the operation of re-tying a double rectangular tablet after it had been once opened for inspection.

Double rectangular tablet re-sealed.

In order to secure again such a document against any subsequent tampering or unauthorized inspection, all that was necessary would be to fix a fresh clay seal on the knot in which the strings were tied at the back. Such a supplementary clay seal is actually found, though in a broken condition, on the reverse of the under-tablet of N. XXIV. viii. 73. This document is of interest also as it has been wrapped up subsequently in yellow silk for the better protection of the seals and then tied round again with coarse string as the reproduction of the covering-tablet in Plate XXIII shows. It is clear, however, that in the absence of a protecting socket such secondary sealing in clay had far less chance of escaping injury and decay. It is noteworthy that in N. XXIV. viii. 90, one of these re-tied documents, the original sealing in the cavity on the covering-tablet was found completely destroyed. Evidently this had been done when the document was first opened. The same was true in the case of N. XXIV. viii. 89 where, however, the fastening was not cut. In this instance it is possible that the seal was first broken to permit of the string being systematically unfolded, and that after the text within had been read the string was fastened round the two tablets again in the regular fashion. It is certainly curious to observe that the five documents, N. XXIV. viii. 86, 87, 88, 89, 90, which were found either re-fastened, or open or with the seal cavity empty, form a regular series which, as the numbering shows, were discovered in close proximity to each other. It almost looks as if the depositor of the little archive had intentionally put down here a separate packet of documents disposed of in one way or another.

Condition of clay sealings.

Turning to the seals which, as seen, were essential requisites for the authentication of these documents on wood, it is of importance to note that all records found in the deposit, with the exception of the two pieces, N. XXIV. viii. 89, 90, already referred to, still retain their seal impressions in clay. Only very few of the latter (N. XXIV. viii. 75, 85) have suffered any damage, while in a few cases the seals do not appear to have fully taken (N. XXIV. viii. 78, 87, 92). On fifteen documents the seals used are single; among the rest five, N. XXIV. viii. 73, 79, 81,

[9] Cf. *Ancient Khotan*, i. pp. 349 sqq.

91, 96, show two impressions, and three others, N. xxiv. viii. 77, 85, 87, each three impressions. Now this prevalence of single seals might at first thought seem to militate against the assumption that the mass of double rectangular tablets here deposited contained deeds, contracts, or the like. But even without the direct evidence of the documents already deciphered, of which more below, it is well to remember that a practice widely spread through different regions and periods was content to authenticate such legal instruments merely by the seal or signature of the person of authority before whom they were drawn up.[10]

Seal of Chinese command of *Shan-shan.*

Now from this point of view we have a seal of the greatest interest on the two double tablets N. xxiv. viii. 74, 93 (Plate XX) which show the impression of a square seal with four Chinese 'seal characters'. The same is seen also on the rectangular covering-tablet N. xxxvii. i. 2 (Plate XXIII). From the transcript made by Chiang Szŭ-yeh M. Chavannes has read these characters as 鄯善郡印 *Shan-shan chün yin*, meaning 'seal of the [chief official of the] command of Shan-shan', and Mr. Hopkins's examination of the original has confirmed this interpretation. The term *chün* 郡 'command', as M. Chavannes points out, corresponds to the 'prefecture' *fu* 府 of modern times. It has already been noted above that the 'kingdom of Ching-chüeh' the chief settlement of which must be located at the Niya Site, was dependent on Shan-shan or the Lop-nōr territory during the very period which preceded the abandonment of the ancient oasis towards the end of the third century A. D.[11] The discovery of these documents bearing the seal of the Chinese official in political charge of Shan-shan thus strikingly corroborates the statement of the *Wei lio* about the relation of Shan-shan and Ching-chüeh, and at the same time suggests that the control of the Chinese administration over the civil affairs of this region was greater than might otherwise have been supposed; for, as we shall see presently, Prof. Rapson's decipherment of N. xxiv. viii. 74, now opportunely available, conclusively proves that this document is a deed concerning the sale of land.

Groups of clay sealings.

None of the other twenty seals of which impressions appear on these documents furnishes any indication as to the persons who used them; for only one of them, the right-hand seal among the three borne by N. xxiv. viii. 77, shows any writing, and its faintly impressed characters, apparently Kharoṣṭhī, cannot for the present be read with any certainty. Of several we have repeated impressions, and it is curious to note that a pair of seals (N. xxiv. viii. 73, 81) and a triplet (N. xxiv. viii. 85, 87) appear twice, placed side by side in identical fashion. Were these the seals of officials holding joint charge or of partners figuring in repeated transactions? In the pair of seals just referred to (see Plates XX, XXIII) we see an archaic Zeus from an intaglio of undoubtedly classical workmanship and a head with long curling hair which shows clearly the influence of a late Medusa type. In the triplet of seals, N. xxiv. viii. 85, 87 (Plates XX, XXI), the impression to the right is the best preserved; it is taken from a round intaglio showing two heads set back to back and surmounted by a third. This representation of an Indian Trimūrti is curious, especially as the influence of the classical engraver is unmistakable in both design and technique.

Classical influence in seal types.

Of Western workmanship were probably the intaglios found impressed on N. xxiv. viii. 77, 78, one showing the bust of a male holding a flower and the other a pair of male and female figures facing each other. Unfortunately both seals are too poorly preserved for reproduction. The bust

[10] It may suffice to quote here what Sir Henry Yule states regarding the original of the Last Will of Marco Polo who passed the Niya region just about a thousand years after the probable date when this archive was hidden: 'There is no signature, as may be seen, except those of the Witnesses and the Notary. The sole presence of a Notary was held to make a deed valid, and from about the middle of the thirteenth century in Italy it is common to find no actual signature (even of witnesses) except that of the Notary'; cf. Yule, *Marco Polo*, i. Introd. p. 72, note.

[11] See above, p. 219.

of a woman with a flower or mirror in her hand, N. xxiv. viii. 79 (Plate XX), is a motif which we have met already in a seal found earlier at this site (N. xv. 155; *Ancient Khotan*, ii. Plate LXXII). The head of a man with elaborate head-dress, holding some ill-defined object, is of coarse workmanship, but is nevertheless of interest as the type and pose curiously recall the representation of the king on certain Kuṣana coins.[12]

Among several seals of debased work showing human figures, N. xxiv. viii. 71, 72, 76, 94, 96 (see Plate XX; also *Desert Cathay*, Fig. 95), the last named deserves special mention; for the male divinity there represented with nimbus and sword can be safely recognized, by the double sack-purse carried in the left hand, as Kubera or Vaiśravaṇa, the god of riches and Guardian (Lokapāla) of the Northern region. We know that he was specially worshipped at Khotan as a kind of *genius loci*.[13] It is significant that this seal, though manifestly of local origin, reveals unmistakably Roman influence. The remaining impressions show mostly animal figures, the charging elephant seen in N. xxiv. viii. 86, 95 (Plate XX) being, perhaps, the most spirited among them, and conventionalized representations of birds, N. xxiv. viii. 75, 79, 82, 83, 92, 96, the most frequent. The comparison of these impressions with the seals in stone or metal found at the site or obtained at Yōtkan[14] leaves little doubt about the originals having been produced in the Khotan region.

Seals of local workmanship.

The value of the rich haul of ancient records yielded by this ruin N. xxiv lies even more, perhaps, in their remarkable state of preservation than in their number. Since Professor E. J. Rapson kindly charged himself with the decipherment and eventual publication of the Kharoṣṭhī materials brought back from my first journey, the exceptional difficulties presented by their script, language, and contents have revealed themselves only too clearly. The obscurities inherent in this very cursive form of Kharoṣṭhī writing have proved quite as serious as those arising from the use of an early Prākrit dialect which differs considerably in phonetic peculiarities from the forms represented in Indian literature, and in addition contains a certain admixture of manifestly non-Indian words and terms not yet traced to their origin. But what probably has increased the difficulties of interpretation more than anything else, is the fact that, as recognized from the first, we have in these Kharoṣṭhī documents mainly official records or correspondence relating to the petty details of local administration and daily life, i. e. subject-matters which would often perplex the uninitiated, even if presented at a period less remote and in more familiar script and language, and for the elucidation of which the extant literary remains of India offer practically no help.

Difficulties of decipherment of Kharoṣṭhī documents.

The difficulties here briefly indicated may explain why, even with the very valuable aid afforded to Professor Rapson's labours by his distinguished *confrères* M. Senart and M. l'abbé Boyer, the actual publication of the Kharoṣṭhī records brought back from my first expedition has not progressed as yet beyond the specimens made accessible in preliminary transcripts and renderings by 1905.[15] Considerable advance was in fact made in preparing those documents for publication,[16] but it became increasingly clear that for the solution of many remaining doubts and puzzles there was great need of additional materials, and in particular of an adequate supply of complete documents in which the state of preservation should leave no room for uncertainty as to the characters actually inscribed.

Publication of Kharoṣṭhī records.

[12] Cf. Gardner, *Greek and Scythic Kings*, Pl. XXV. 9 (Kadphises); XXVII. 16 (Huviṣka).

[13] Cf. *Ancient Khotan*, i. p. 158.

[14] Cf. Pl. V, XXIX; *Ancient Khotan*, ii. Pl. L.

[15] *Ancient Khotan*, i. pp. 364 sqq.

[16] Transcripts, with critical notes, of 160 documents, from N. i–iv, had been actually set up in type for the companion volume to *Ancient Khotan* which was to contain the edition of the Kharoṣṭhī records excavated in 1901, when Prof. Rapson and his coadjutors arrived at the gratifying decision to embody in the same publication also the fresh documents brought back by me from my later explorations. In view of the further delay thus necessitated I feel double satisfaction at having been able to reproduce relatively so large a number of Kharoṣṭhī documents in facsimile in the plates of *Ancient Khotan* which thus afford sufficient materials for the independent research of fellow scholars.

The finds made in the course of my renewed explorations, and particularly at N. xxiv, have supplied such materials in plenty, and there was therefore ample justification for my learned collaborators in postponing publication until the newly discovered tablets could also be dealt with. In January, 1913, Professor Rapson was kind enough to communicate to me some notes on certain tablets from the new collection which he thought of special interest, and I feel all the more grateful for being thus enabled to utilize his results as they have a close bearing on the questions which the hidden archive in N. xxiv. viii has raised.

Prof. Rapson's decipherment of deed of sale.

Professor Rapson's examination proves that a considerable number of the double rectangular tablets are deeds of sale. 'As a good example of the regular formula conferring full rights of possession, in spite of any merely verbal order of an official at some subsequent time to the contrary,' he cites N. xxiv. viii. 74, the document already referred to on account of the clay impression it bears from the seal of the Chinese chief official at Shan-shan.[17] From the abstract given of the opening portion of the text on the under-tablet it appears that 'this is a deed recording the sale of *miṣi*-land. "Miṣi" is some crop. The seller is Koñaya and the purchaser is the writer (*divira*) Ramṣotsa. It is dated in the 17th year of the king Jiṭugha Aṃguvaka, in the 12th month and the 8th day. The price is 70 *khi* (a sum or measure, to be paid apparently in *masu*, a term the meaning of which is not yet certain), and Ramṣotsa seems to have deposited a two-year-old camel as an earnest of the payment. The purchase has been completed, both the part-payment 10 *khi* (*aṅgamuli*) and the remainder of the sum total, 60 *khi*.'

Deed concerning land, and its alteration.

Then follows a definition of Ramṣotsa's full rights which is thus translated: 'This writer Ramṣotsa has full proprietary rights over this *miṣi*-land. It shall be his for the enjoyment of all its benefits in whatsoever way he desires, whether for ploughing or sowing, or for giving to another as a gift or as a *namanya* [*nāmanya*, tenancy ?]. If at any subsequent time a *v̂asu aǵeta* [*v̂asu*, a common title; *aǵeta* also apparently the title of some official] shall give any order concerning it, such a verbal order shall be invalid at the king's court.' On the reverse of the covering-tablet next follow the names of certain witnesses, and the deed ends thus: 'This deed is written by the writer Tamaśpaputra at the order of the mahātman, the writer Mogata. This document is for the instruction of Koñaya. [space] The string is cut by *toṃgha* [well-known title] Yāṃcā (?) by name.' It seems very tempting to connect the broken condition of one or several string folds which, as mentioned above,[18] is noticeable in a number of unopened documents from the hidden deposit with the legal ceremony referred to in the concluding words of the deed. Only further examination of these documents and their legal technicalities can settle this little detail. But what is important is the certainty that my assumption was right when at the very time of the find I thought 'myself the *de facto* possessor of deeds probably referring to lands and other real property'.[19]

Sanskrit verses on Kharoṣṭhī tablet N. xxiv. viii. 9.

This will be a convenient place to sum up briefly also the rest of the interesting information which Professor Rapson's notes convey. The tablets to which reference is made are not from the hidden deposit but were found in the same ruined residence. Particularly important from the philological point of view is the discovery he has made of four Sanskrit ślokas written on the obverse of the wedge under-tablet N. xxiv. viii. 9 (see Plate XXIV) which on its reverse had served for a record of receipts, apparently sums or supplies given to servants on a farm. The verses for which a more learned scribe has utilized the obverse, are the very first specimens of Sanskrit literature so far found in Kharoṣṭhī script and clear up a number of important palaeographic questions connected with the latter. Scarcely less interesting is the Takhtī-shaped tablet N. xxiv. v. 1 containing at least eight lines of verses in Prākrit on obverse and reverse. The first of these is taken from the Dhammapada

[17] See above, p. 230. [18] Cf. above, p. 228. [19] See *Desert Cathay*, i. p. 284.

and shows curious variants. These notes, brief as they are, will suffice to show how much fresh light may yet be thrown on manifold aspects of the culture and administration prevailing in this region during the early centuries of our era when these abundant records have been fully examined and made accessible for detailed researches.

Circumstances in which documents were hidden.

From the first I recognized that the circumstances in which the documents contained in the hidden deposit of N. XXIV. viii had come to be buried were deserving of the closest consideration. It was obvious that they might help to elucidate the important question as to how this settlement was deserted. From the care which had been taken to hide the deeds and at the same time to mark their position—for that, no doubt, was the purpose of the clay lump which had been found placed in front of it, and had first led Rustam to start his burrowing—it was clear that the owner had been obliged to leave the place in an emergency, but with a hope of returning. Rustam had quickly guessed the meaning of that mark because similar practices are still resorted to by villagers when obliged to leave their dwellings unguarded. In the case of the deeds the absence of any provision for a covering or receptacle to protect such valuable records while buried, clearly suggested hurried departure. With this indication the scattered condition of the other files of tablets, mostly wedges, left above ground seemed to agree well.

Marking of cache.

In any case it would be difficult to account otherwise for such a cache and the way in which its place was marked. Had the hole below the foundation beam been regularly used as a sort of safe, some receptacle would have been provided, and it would not have been necessary to mark its position at all as long as its existence was remembered. If, on the other hand, the departure of the owner had been due to a systematic abandonment of the site, such as the gradual failure of the water-supply would have entailed, we should have expected this collection of specially valued records to be removed with other cherished possessions, neither bulk nor weight presenting any difficulty.

It would serve no useful purpose to conjecture what particular emergency gave rise to this sudden departure, or what prevented the owner's return. So much, however, is certain, that the reoccupation of the settlement must have been subsequently rendered impossible—we do not know how much later—through the change in physical conditions brought about by desiccation. We shall have occasion below to refer to the conclusive proofs which the site furnishes of this change. That it was a gradual one is certain, and it could not, therefore, prevent the abandoned dwellings being visited and exploited during centuries before they were finally covered up by the sands. They must have continued to be searched, probably from the very time of the abandonment, for any objects of value or practical utility left behind. Hence we have reason to feel grateful for the fortunate chance, whatever its nature, which protected the small hidden archive, and the office 'papers' left near it, from the risks of premature discovery and disturbance. But it was scarcely surprising that the other 'finds' in this room included nothing of more value or interest than the various rags and small wooden implements which the Descriptive List shows under N. XXIV. viii. 001–14.

Wooden fire-stick.

Among the scanty 'finds' which the remaining portions of the ruin yielded, the only one needing special mention is the small wooden fire-stick, N. XXIV. x. 001. It is a 'female' stick closely resembling in shape the fire-stick, N. XXIX. ii. 001. a (see Plate XXVIII), and has been reproduced in the paper in which Mr. T. A. Joyce has fully discussed the specimens, found here and at other sites, of this primitive apparatus used for producing fire by 'twirling'.[20] The earliest of these specimens

[20] Cf. *Note on a number of fire-sticks from ruined sites on the south and east of the Takla-makan Desert*, by T. A. Joyce, M.A., in *Man*, xi. No. 3, 24; Fig. 6.

comes from the Tun-huang Limes and the latest from the site of Farhād Bēg-yailaki.[21] That the use of fire-sticks, identical in appearance with those still common among savage tribes, should have been practised by highly civilized communities in Central Asia and survived down to the eighth century A. D., is certainly a curious fact. But it has its parallels elsewhere; for the use of similar apparatus, as Mr. Joyce points out, was known in classical times and has not yet quite disappeared from civilized India either.

Section IV.—EXPLORATION OF N. XXVI AND OF THE SOUTH-EASTERN GROUP OF RUINS

Clearing of N. xii.

After completing the excavation of N. xxiv, I turned my attention again to the ruined dwelling, N. xii (for plan see Plate 8), to the north-west, which there had not been time on the occasion of my former visit to search with all needful care. The thorough clearing now effected served to reassure my conscience; for apart from a quantity of beads, metal fragments, and similar small relics picked up on eroded ground near the ruin, the only finds made consisted of two small tablets and the double-bracket in wood, N. xii. i. 2. This is a fine piece of wood-carving, nearly five feet long and in very good preservation, as seen in Plate XVIII, with floral designs in Gandhāra style on the under-surface and a very effective saw-tooth ornament on the sides. The same inner room, i, where this double-bracket was found, still retained at its north entrance the ornamented wooden door-frame with slanting jambs seen in the photograph (Fig. 56). Its decorative patterns, as already noted in my former Report, closely recalled the *Kingri* work still common in the decorative wood-carving of the Indus region and derived from Gandhāra art.[1]

Excavation of N. xxiv.

To the east of N. xxiv three ruins could be traced in a row lying close together and all half-smothered by dunes. The nearest, N. xxv, proved that of a small and fairly well-preserved dwelling, but yielded no finds of any sort. The next, N. xxvi, was of larger size, and owing to the covering of sand, which rose in parts to a height of eight feet, its clearing cost nearly a day's hard work. The arrangement of its rooms, as seen in the plan (Plate 15), showed several interesting features. The construction of its walls in timber and plaster, with a core of horizontal reeds or else of diagonal matting, as well as that of its doors, roofing, etc., could be traced with ease, as the several photographs show. In the set of rooms to the north, i–iv, ix, we have probably the public apartments of the house, including those which would correspond to the modern 'Aiwān' and 'Mihmān-khāna' of this region. In illustration of these the plan of the 'Aiwān', with guest-rooms adjoining, as seen in a Bēg's house at Bāgh-jigda, near Yārkand, has been reproduced in Plate 12.[2] On the south the family quarters may safely be recognized in rooms v–viii, communicating with each other, and approached from the rest of the house by a separate passage. In the north-west corner room, i, partially eroded, there were found eight Kharoṣṭhī tablets, including the rectangular covering-tablet, N. xxvi. i. 4 (Plates XX, XXIII), still retaining its seal impression in clay; also the curious coarsely cut bone seal, N. xxvi. i. 001 (Plate XXIX).

Arrangement of central apartment.

The large room, iii, in the centre, was once, no doubt, used as the main public apartment. It is seen in the photographs, Figs. 63, 64, and was provided with a raised sitting platform on three sides as well as an open fire-place in the centre where the roof probably once showed a clerestory opening. With the passage, iv, on the east, this central apartment communicated by the door, and also by two side windows, A, B, clearly seen in Fig. 64 and once probably latticed, which

[21] Cf. for other specimens T. xxxiv. 001 (Pl. LII); L.A. v. ii. 1 (Pl. XXXV); F. iv. 004.

[1] Cf. *Ancient Khotan*, i. p. 380.

[2] Cf. *Desert Cathay*, i. p. 137; as regards the use of 'Aiwāns' in general, *ibid.* i. pp. 135 sq.

in position and construction corresponded exactly to those described in N. xxiv. The only find in this room, but a very interesting one, was the massive decorated double-bracket, nearly eight and a half feet long and fourteen inches in height, which is reproduced in Plate XVIII. The photographs, Figs. 63, 64, show it again, raised on the wooden pillar measuring five feet eight inches in height and a foot in diameter, which had once carried it and which was found lying close by. Both sides of the double-bracket as well as its under-surface bear well-designed though coarsely executed motifs in bold relievo. Monsters of the composite type, such as Gandhāra borrowed from Hellenistic art and Central-Asian Buddhist art also cherished, with crocodiles' heads, winged bodies, and the tails and feet of lions, fill the side panels on each vertical face. The central panel is occupied by a vase holding long curving stems which end alternately in broad leaves and fruits. The whole arrangement recalls that of an Indo-Corinthian capital.

Architectural wood-carving.

The under-surface at its ends is decorated with panels of varying design; the motifs of these are partly floral and all are elsewhere represented among the ornamental carvings of this site, as also in Gandhāra work. The plain surface of the centre is accounted for by the fact that the double-bracket, as seen in Fig. 63, though its mortice fitted the top of the chule of the pillar, did not take in the whole of the chule but originally rested on another double-bracket, now lost. To judge from the interval left between the foot of the chule and the under-surface of the extant double-bracket, this intermediary bracket had a height of about six inches. It would have been quite impossible to move the massive piece of carved timber as found, owing to its size and weight. So I was glad that Naik Rām Singh's skill as a carpenter permitted me to have the panels carefully separated along the ornamental bands dividing the panels. Even thus the weight of each portion had to be reduced by hollowing out the core in order to make up practicable loads. The reproduction of the rejoined panels in Plate XVIII shows that this fine piece of ancient wood-carving did not suffer either by this unavoidable operation or the subsequent long and difficult transport.

Room N. xxvi. vi found intact.

In the southern portion of the house the room, vii, had evidently served as a kind of entrance hall or passage. Two out of its four doors had a width of two feet only, widening to two feet three inches at the bottom owing to the slant of the jambs. They stood only five feet above the floor, the same feature being noticed also in some doors of N. xii and other residences. The small room, vi, adjoining, in the south-west corner of the house, was so deeply buried under a dune that it had preserved its walls and roofing almost intact. The rafters of the latter with the layer of brushwood, once carrying the mud roof, were still in position. The two outer walls were solidly built of sun dried bricks, with a thickness of one foot and a half. The west wall had a narrow window or air-hole just below the ceiling, which was at a height of nine feet two inches from the floor. The absence of any other opening, and the smoke-begrimed walls, showed that this little apartment had been specially affected as a warm corner during the winter months. The room contained a plastered platform underneath the window and on the opposite wall a perfectly preserved fire-place, with a wooden bench in the corner beside it, as seen in Fig. 71. On the top of the fire-place there lay, just as the last occupier had left them, a collection of perfectly preserved Kharoṣṭhī tablets, N. xxvi. vi. 1–11, mostly of oblong shape, of which specimens are reproduced in Plates XXVI, XXVII. With them was found the 'female' fire-stick, N. xxvi. vi. 12, and the empty seal-socket, N. xxvi. vi. 001 (Plate XXVII). The floor close by yielded some more tablets, resembling labels in shape, as well as the modern knife-handle, N. xxvi. vi. 002 (Plate XXXVI).

More objects with wood-carving.

The large room, viii, to the east proved empty, except for a large and well-preserved cupboard in wood, of the shape already described as seen in the photograph, Fig. 57. Its cover-board showed on two edges decorative carving resembling a twisted rope. Finally, it was in the south-east corner room, v, that there lay, almost on the surface and therefore badly splintered by exposure, the large

double-bracket, nearly seven feet long, which I had noticed on my first return to the site. It is seen photographed in the foreground of Figs. 63, 64 after transference to the central room, iii. Its ornamental wood-carving showed closest resemblance to the floral motifs displayed by the central panels of the double-bracket found in room iii and already described.

Supplementary clearing at N. v.

The excavation of a small dwelling close to my camping-ground and without any special interest, was still proceeding under the Surveyor's supervision when, on the afternoon of October 26, I revisited the ruin N. v, where in 1901 I had cleared the precious rubbish heap of N. xv with such abundant results. What drew me back there, apart from the attraction of a scene of successful work, was the wish to recover some items from the refuse which I remembered with regret that I had thrown aside then as valueless. These were small oblong pieces of hard 'green' leather, rounded at one end and peculiarly punched with holes, in which I had since learned to recognize pieces of leather scale armour.[3] To my satisfaction I found the refuse we had cleared out still undisturbed under a light cover of drift sand, and my conscience was relieved when, after some careful scraping, we recovered the missing scales, N. v. xv. 004–006, 0011. As their description in the List below shows, they closely resemble in appearance the one already illustrated, though there are slight differences in size and in the position of the holes which served for threading the scales together. A find even more gratifying was a small Stūpa model in wood, N. v. xvi. 001 (see the drawing in List, p. 247), which I picked up on the surface of the ground close to the adjoining structure N. xvi. It had evidently been laid bare by a slight move of the drift sand, and now afforded striking confirmation of the belief expressed in *Ancient Khotan* that this small and badly decayed ruin was that of a Buddhist shrine.[4] The model which, no doubt, had served as a votive offering, shows quite clearly the threefold base, the cylindrical drum, and the dome characteristic of the Stūpa type prevailing among the ruins of the Tārīm Basin. It deserves, however, to be noted that the proportions of the successive bases in this little model differ materially from those observed in the only Stūpa of the Niya Site, the top base being shown as the highest, while the bottom one is so in the real Stūpa.[5]

Ancient cemetery remains.

On the same occasion I also examined a spot situated a little under a mile to the north-north-west of N. xxvi (see site-plan, Plate 7), where Ibrāhīm and a companion had, while 'treasure-seeking' two years before, come upon remains of skeletons. They had promptly christened it the 'Mazār', an unconscious preliminary, perhaps, to resumed local worship. There, by the side of an isolated tamarisk-cone some thirteen feet high, I found, indeed, unmistakable indications of an ancient cemetery. Not only were there plentiful human bones scattered over the eroded slopes of a small plateau, especially to the east and north, but also bleached and splintered boards which, to judge from their sizes, must have belonged to coffins. The larger pieces measured on the average six to seven feet in length; the shorter ones clearly showed their use as head and foot pieces of coffins by the tenons and mortises intended for dovetailing. The fragments of dark brown and red fabrics, marked N. x. 001, were picked up near a heap of bones here. The discovery of this cemetery is of interest as it furnishes conclusive evidence, not otherwise available at this site,[6] that interment was practised by at least a portion of the inhabitants, the majority of whom we may safely assume to have been Buddhists. Unfortunately it is impossible to base much archaeological hope upon this fact seeing how little chance any objects buried with the dead would have of escaping destruction on ground exposed to the full force of wind erosion. Here it had left no intact skeleton, not even a single complete skull for measurement. As an instance of the burrowing power of the winds

[3] Cf. *Ancient Khotan*, i. pp. 374, 411 (diagram); Add. p. xvi.

[4] See *ibid.*, i. pp. 374 sq.

[5] Cf. *ibid.*, i. p. 339.

[6] The human remains found in 1901, at a small ruin to the south of N. III, could not be recognized with certainty as belonging to a regular burial-place of the same period as the extant ruins; see *Ancient Khotan*, i. p. 338.

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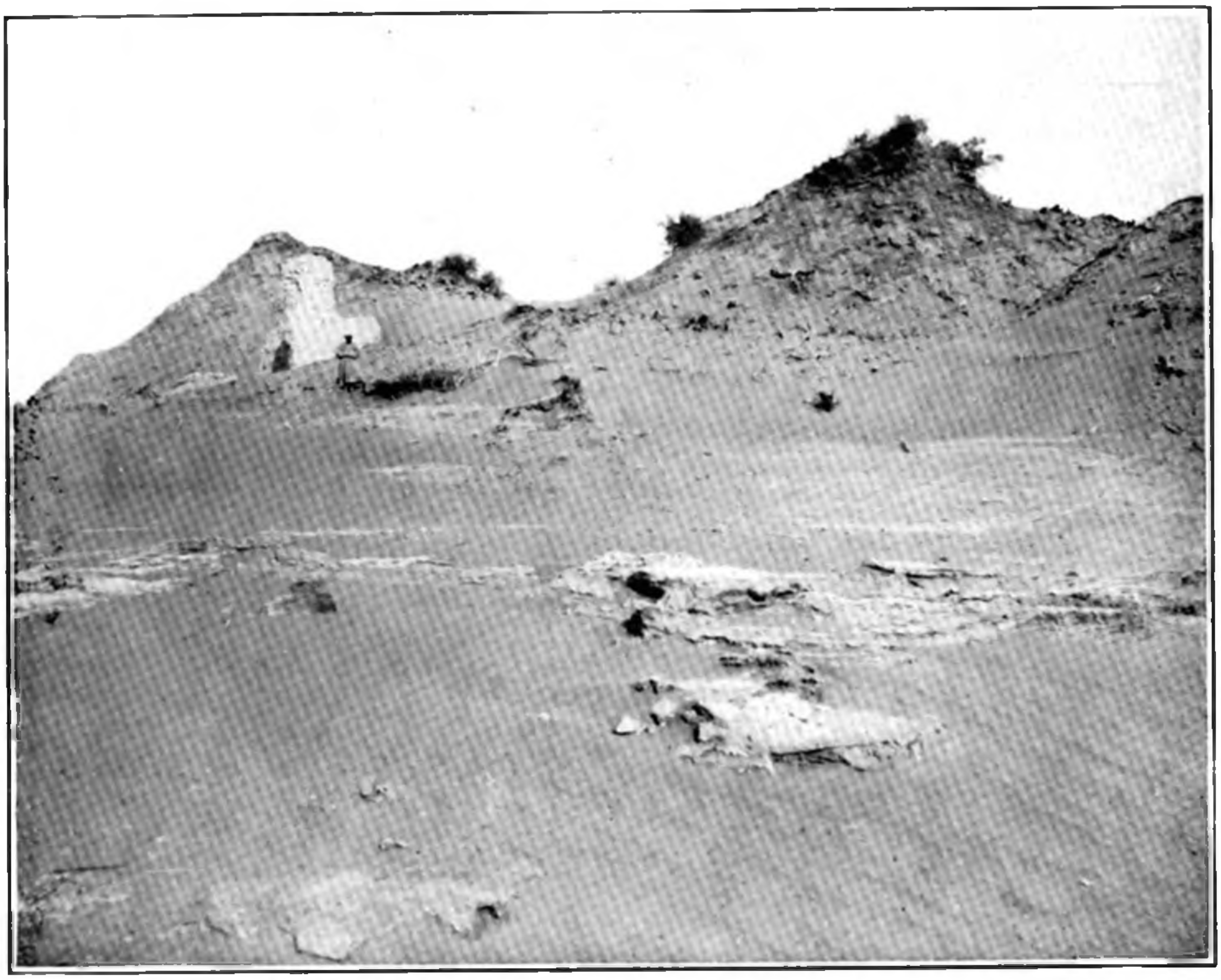
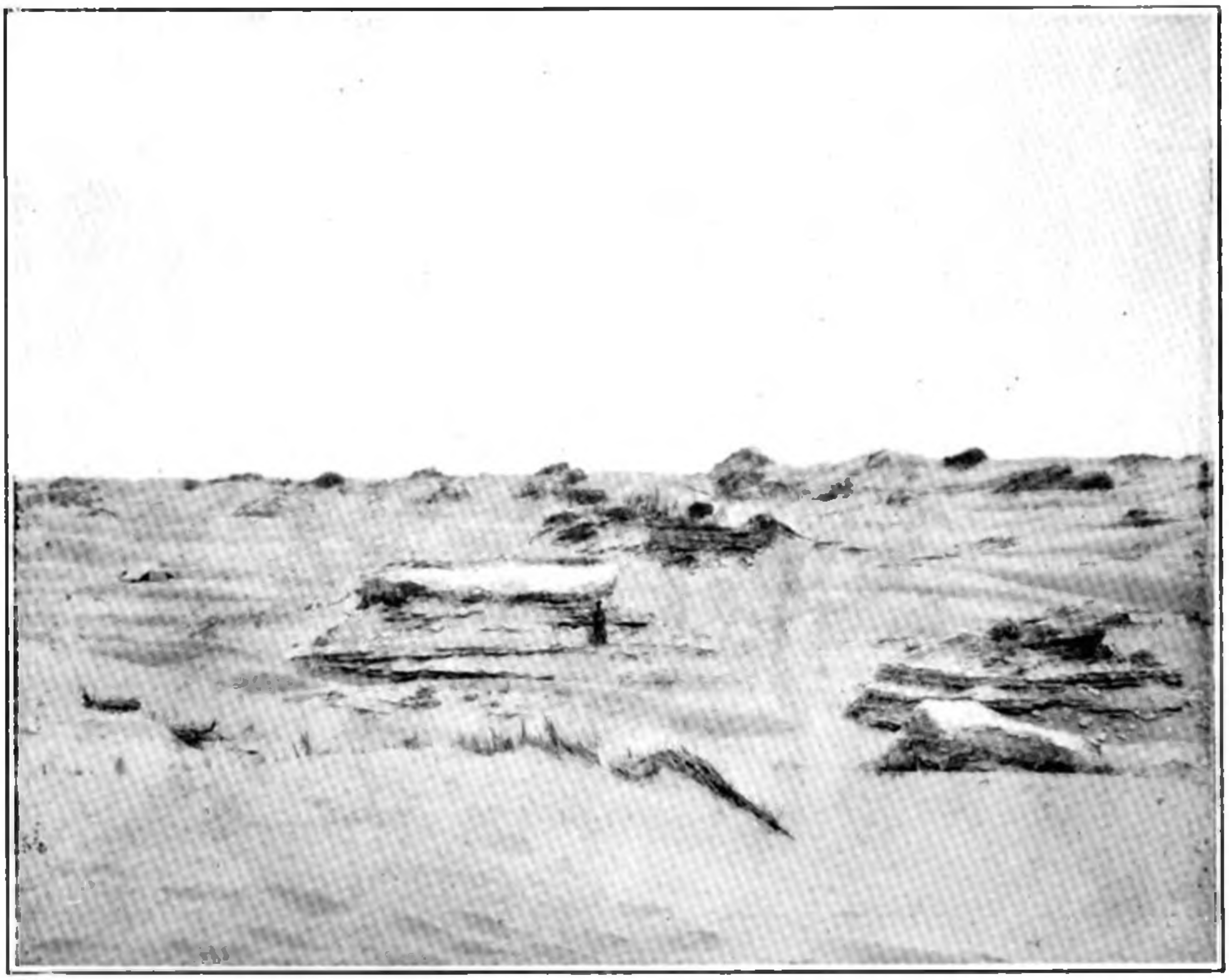
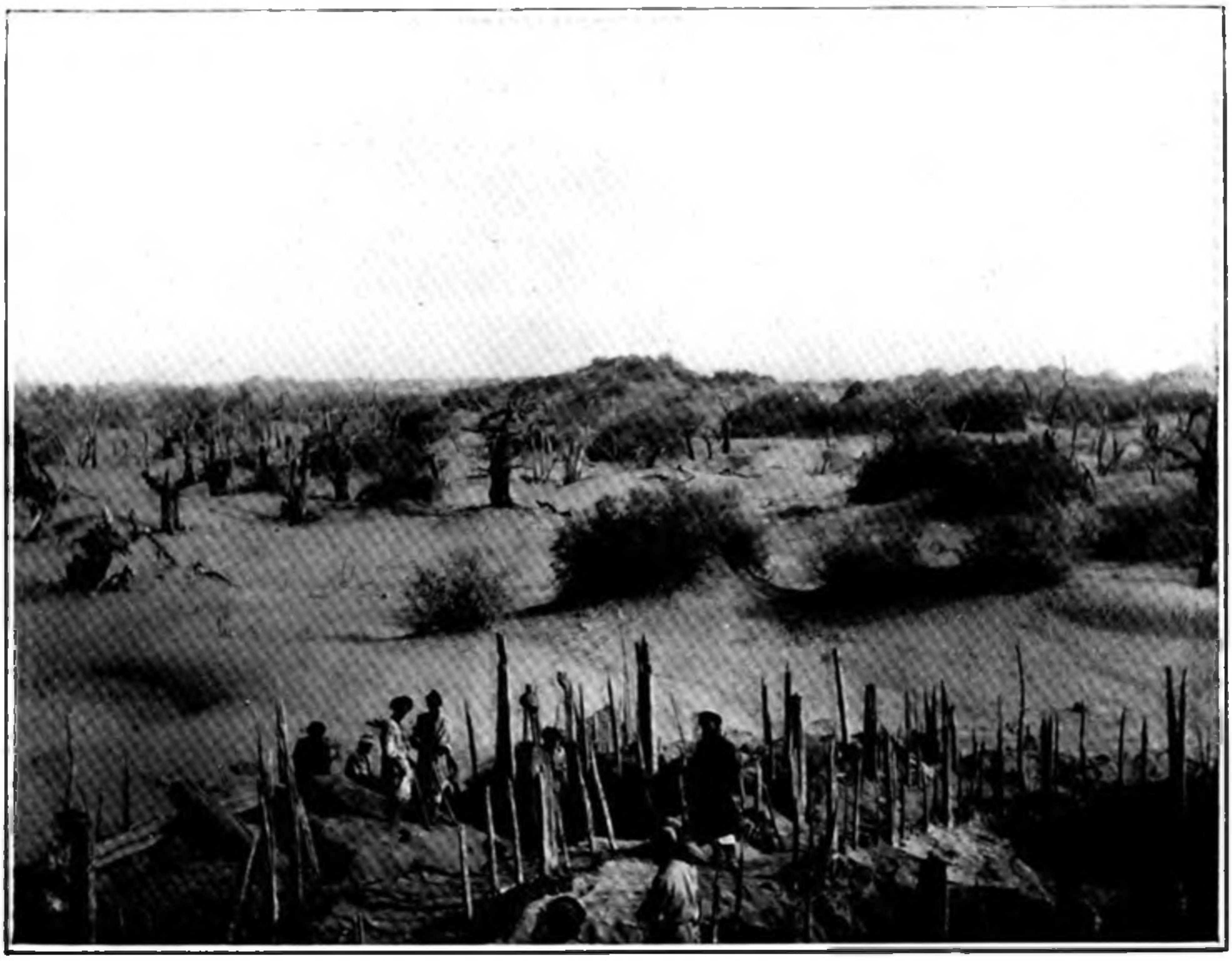


65. RUINED STŪPA, NIYA SITE, SEEN FROM SOUTH-EAST.
Man standing at fenced enclosure.

67. REMAINS OF ANCIENT CATTLE-SHED, N. XXXIII, NIYA SITE.
Row of dead poplars on right.

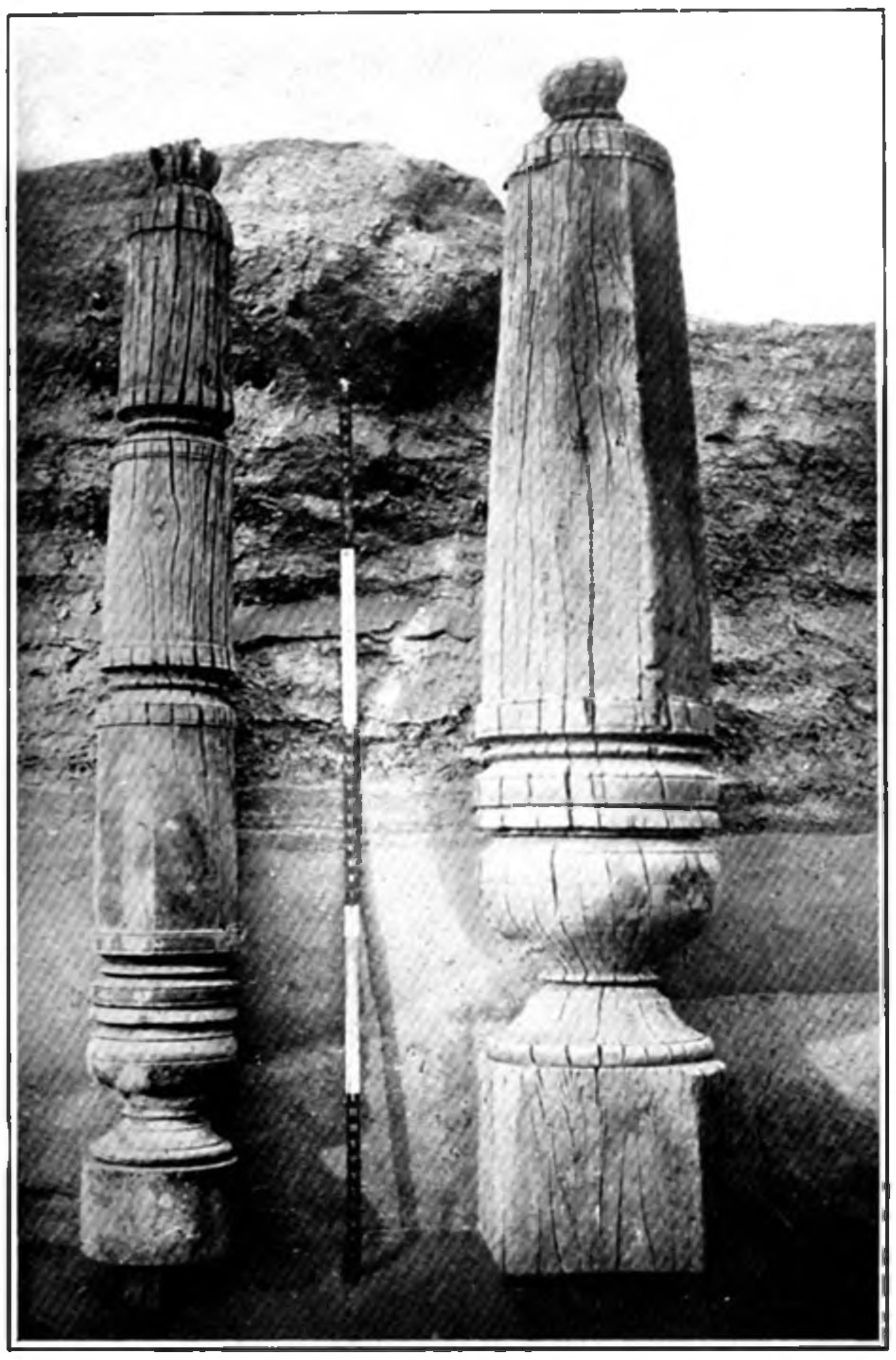


66. VIEW FROM SOUTH-WEST TOWARDS RUIN N. XXVIII, NIYA SITE.
Sand-buried fence of arbour in foreground.

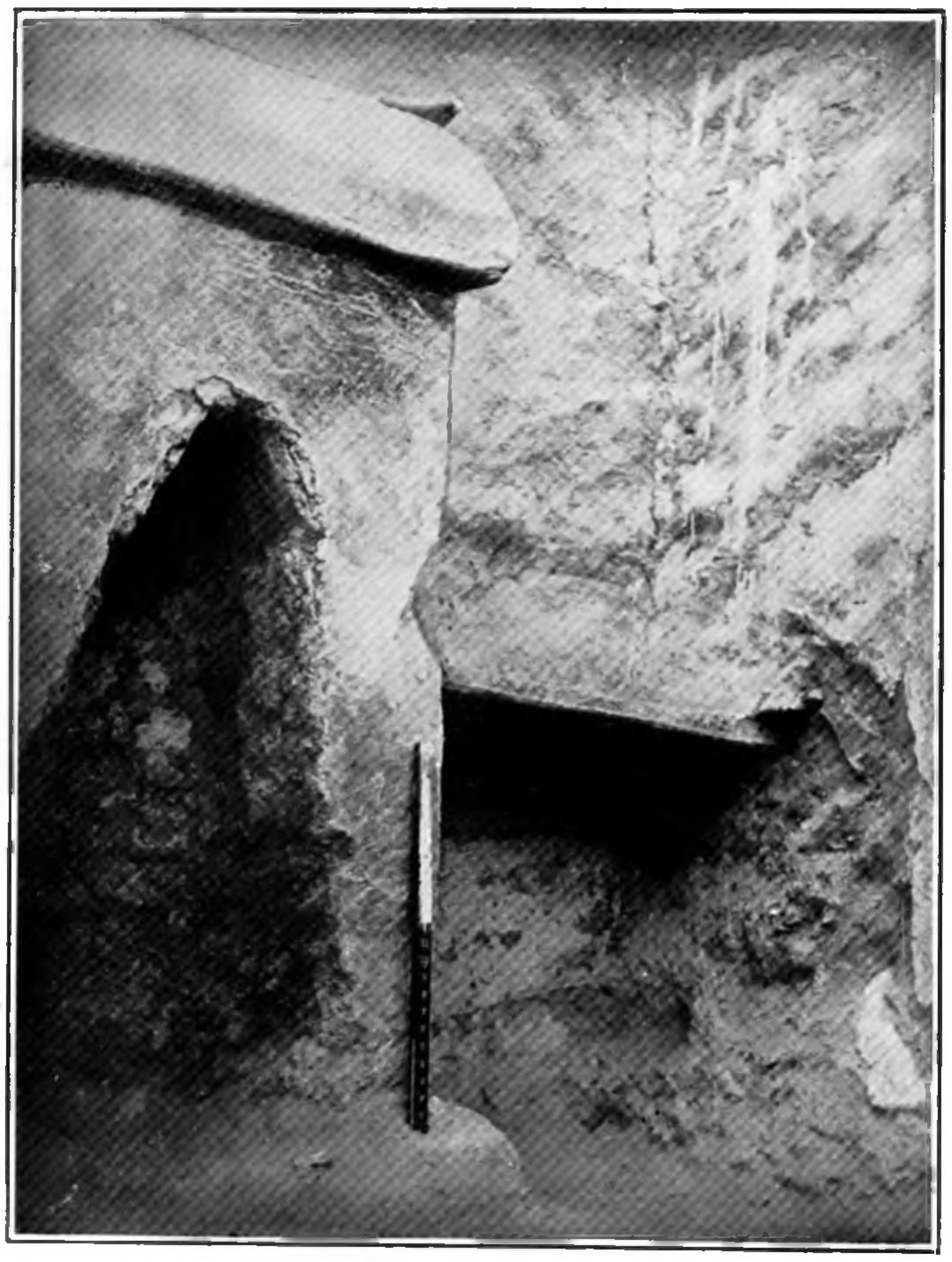


68. RUINED DWELLING N. XXXVI, NIYA SITE, IN COURSE OF CLEARING, SEEN FROM SOUTH.

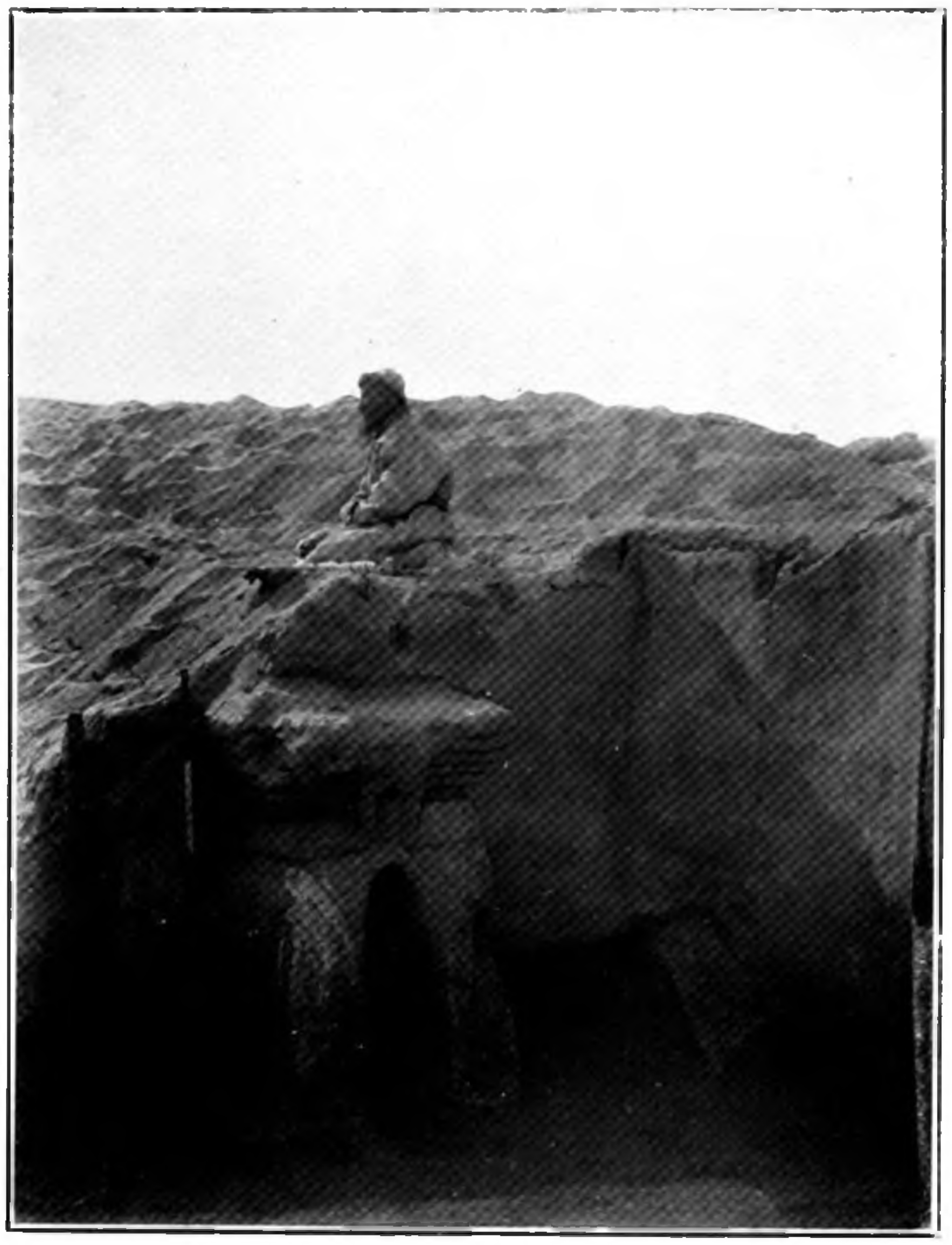
69. WOODEN PILLAR EXCAVATED IN RUIN N. XXXVIII, NIYA SITE.



70. WOODEN PILLARS EXCAVATED IN STRUCTURE E. III T'ANG FORT, ENDERE SITE.



71. FIRE-PLACE AND BENCH IN ROOM vi OF RUINED DWELLING, N. XXVI, NIYA SITE.



72. INTERIOR OF UNDERGROUND ROOM, E. viii, T'ANG FORT, ENDERE SITE.

observed in this vicinity I may mention that the small ruin N. x, situated to the south-east of the 'Mazār', and excavated in 1901,[7] was now adjoined by an eroded depression which lay in one place fully twenty-eight feet below the original ground-level.

While still encamped near N. xiv I had sent out a select band under Ibrāhīm, my old guide, to search eastwards for the ruins which Islām Ākhūn had alleged he had seen, but which he had proved unable to find again. After three days' search the party succeeded in tracing a number of ruined dwellings south-eastwards which, hidden away amidst high and closely packed sand-cones, had escaped discovery five years before. A reconnaissance upon which I dispatched the Surveyor had fixed their position in a long-stretched line to the east and south-east of the southernmost ruins, N. iii, iv, explored in 1901. So on October 27 camp was shifted to the centre of this newly-discovered group, the distance proving close on five miles. *En route* I was able to examine the ruined Stūpa again, and noted that, though there was little or no change apparent since 1901 in the conditions of the drift sand immediately around the small structure, yet the movement of the sand had now left bare the line of an enclosing fence to the south and south-east, thus showing the ancient ground-level (Fig. 65). At the ruin N. iii neither the cover of sand nor the state of erosion showed any perceptible change. From here we marched for over a mile to the south-east across broad dunes, fifteen to twenty feet high and often broken by chains of big tamarisk-cones, until a convenient camping-place was found on deeply eroded ground near three small ruins, which rose on 'witnesses' of striking appearance (Fig. 66). **Discovery of ruins to south-east.**

The northernmost of these, N. xxvii, was situated on steeply eroded slopes by the west side of a tamarisk-cone. It consisted of the exposed and badly eroded remains of two rows of small rooms built in timber and plaster, forming a block of about fifty by forty feet. The only objects recovered by clearing them consisted of a rectangular covering-tablet on which all writing had been bleached, and a wooden comb (Plate XXVIII). N. xxviii was another small ruined dwelling occupying the top of an island-like 'witness', seen in Fig. 66, which rose with almost vertical slopes some twenty feet above the eroded ground. Abundant débris of timber lay around, but only three small rooms and a passage to the west of them were still traceable. The floor had been swept clear by the winds, except in a corner of the passage, where there lay sand but only to a height of one foot. It was here that Ibrāhīm alleged he had found the fifteen tablets which he brought to me on October 24 on returning from his reconnaissance, and which are shown at the end of the Descriptive List marked N. Ibr. 1, 001–0011, 0013, 0014, 0016. I have no special reason to doubt the correctness of his statement, and the generally bleached or warped condition of these tablets, as seen in the specimens, N. Ibr. 005, 0016, reproduced in Plates XXVI, XXVII, distinctly supports it. A smaller 'witness', some fifteen yards to the south, which had been completely cut off from the main plateau by the progress of erosion, retained on its top a stratum of horse- and sheep-dung. About 150 yards to the west-south-west there emerged from the protection of a sand covering the shrivelled trunks of an arbour, with a fence traceable for about forty yards, seen in the foreground of the photograph, Fig. 66. At the south-west end the remains of a single-roomed structure, N. xxxiv, could just be traced. **Clearing of ruined dwellings N. xxvii, xxviii.**

Proceeding about three-quarters of a mile to the south, past scattered remains of more arbours and gardens, I reached the ruin of a relatively large house, N. xxix, previously reported by the Surveyor. The plan in Plate 16 shows the disposition, etc., of the rooms, which were built partly in timber and plaster and partly with plastered rush walls. Room i, to the north-east, had evidently served as an office and yielded sixteen well-preserved Kharoṣṭhī tablets, mostly wedge-shaped or rectangular. From the adjoining room ii came, besides some small oblong tablets, a large double- **Excavation of ruin N xxix.**

[7] See *Ancient Khotan*, i. p. 379.

wedge tablet and a wooden fire-stick (Plate XXVIII). This was found tied by a loop of goat's-hair rope to a short curved piece of wood resembling a primitive pulley (see N. XXIX. ii. 001. b in Plate XXVIII), of which other specimens are shown by the same plate; the original use is doubtful. From the long passage, iv, came a perfectly preserved rectangular under-tablet of respectable size, twelve by five inches, showing eleven lines of clear Kharoṣṭhī text with a date which I read as the 11th year of King *Jiṭughavaṣmana devaputra*. The large room, v, yielded no relics. Outside it, yet within the fenced enclosure of a court or garden, lay the remains of long, twisted vine branches, once trailing, no doubt, close to the ground, after the fashion of Turkestān gardens. Near a cattle-shed to the north-east a mulberry-tree still raised its gaunt fissured trunk to a height of about fourteen feet.

Miscellaneous finds in N. XXIX.

Among the miscellaneous objects found within, or quite close to, this ruined residence there may be mentioned the fragment of richly coloured ingrain material, N. XXIX. 001. a (Plate XLIX); a builder's float in wood for plastering wall faces, N. XXIX. 002 (Plate XIX); and a well-preserved bronze ring, N. XXIX. 006 (Plate XXIX). Two ornaments, the urn-shaped pendant, N. XXIX. 005, and the fragment of a large cylindrical bead, N. XXIX. 007, both shown by Plate XXIX, are of special interest. The material is a blue paste which I was first inclined to take for celadon. Both in shape and material, as Mr. Woolley points out, they closely resemble Western products such as are found in Roman Egypt.

Remains of dwellings N. XXX–XXXIII.

The ruins, which lay to the north, proved, when searched on October 28, the remains of small and poorly built dwellings, as befitted the homesteads of what was evidently the easternmost fringe of the ancient settlement. N. XXX, reached after going over a mile due north from N. XXVIII, consisted of three small rooms, the lines of their walls and sitting platforms being just traceable under one or two feet of sand. Two wedge-shaped under-tablets were found here, one completely bleached. N. XXXI was another small dwelling, about a furlong to the north-west. Above ground eroded to a depth of over ten feet there remained here only scanty traces of a room, sixteen by fourteen feet, adjoined by a fenced court to the west. About a quarter of a mile to the west of N. XXX there emerged the remnants of a small structure, probably a cattle-shed, from the side of a tamarisk-cone, rising about eighteen feet above the level marked by the ruin. The ground immediately below the latter was eroded to a depth of fifteen feet. Going for about one-third of a mile to the south-west I found the top of a small eroded ridge occupied by a small ruin, now completely decayed, N. XXXII. The walls of two small rooms were barely traceable, the height of the protecting sand being less than a foot. Much fallen timber strewed the east slope. Finally, a short distance to the south I could trace the remains of a cattle-shed and arbour, N. XXXIII, on two small 'witnesses', as seen in the photograph, Fig. 67. Close by to the north-east there emerged from the side of a tamarisk-cone the dead trunks of three or four poplars planted in a row. This completed the survey of what structural remains could be found by us northward.

Ruin N. XXXV.

Returning thence to where my last camp had stood, I proceeded southwards in search of the remaining ruins. A strong north-east wind filled the air with a grey dust haze. But even without this the surroundings were growing more and more sombre, in spite of the more frequent appearance of still living scrub. The ruins had to be searched for amidst closely packed sand-cones which raised their heads with tangled masses of tamarisk to heights varying from twenty to forty feet. It was in a singularly gloomy and confined spot of this maze that the ruin N. XXXV proved to be situated, over half a mile to the south of N. XXIX. It was that of a relatively large dwelling (see plan, Plate 17); but the exposed western portions had suffered badly by erosion, always particularly effective at the foot of sand-cones, and the rest was made practically inaccessible by the sliding of the sand from the slope above. From the central room, ii, which was still traceable, a complete

double-wedge tablet was recovered. Among the small objects picked up from eroded ground close by was a neatly worked pendant showing a piece of greenish glass set in a round silver mount, N. xxxv. 006 (see Plate XXIX).

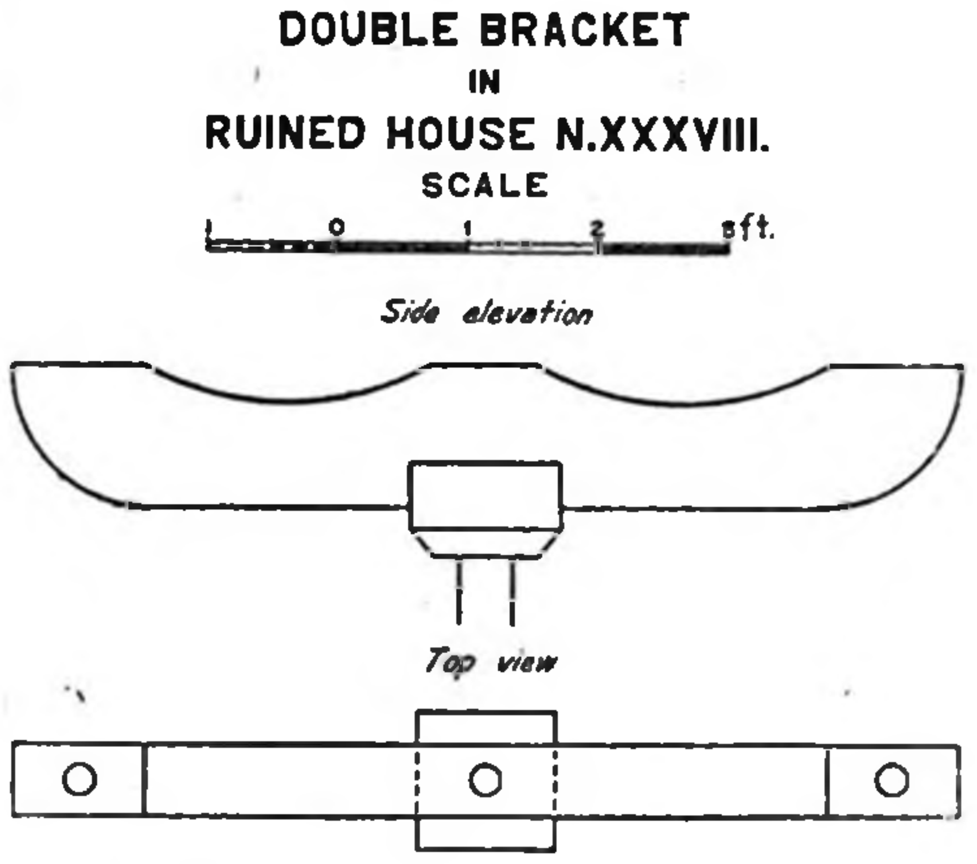
SECTION V.—EXPLORATION OF SOUTHERNMOST RUINS AND GENERAL OBSERVATIONS ON SITE

Excavation of dwellings N. xxxvi, xxxvii.

We emerged on somewhat more open ground on nearing the area where, on the day of my arrival, I had noticed a few living Toghraks still lingering among the numerous dead ones. Here, amidst some low dunes and plentiful tamarisk scrub, as seen in the background of the photograph, Fig. 68, lay a group of ruins, the southernmost of the main site, except for the isolated remains noticed on my first return. In this jungle which still struggled against death, half a dozen ancient dwellings were traceable, all of modest extent and, it seemed, of rather rough construction. In several of them I noticed that the diagonal matting forming the core of the walls was strengthened on the outside by thick vertically placed rush bundles. The plaster covering used appears to have been very thin and had almost completely decayed. N. xxxvi, at the north foot of a conspicuous tamarisk-cone (Fig. 68; for plan, see Plate 17), yielded no remains of any sort. But from the several apartments of the ruin to the south of this, N. xxxvii (see plan, Plate 17), there were recovered a number of Kharoṣṭhī tablets, including a rectangular cover with the clay seal of the Chinese command at Shan-shan (Plate XXIII), besides a curious piece of decorative wood-carving (N. xxxvii. ii. 004, Plate XIX), which evidently belonged to some piece of furniture. The four-petalled flower appearing on it is of an unusual form.

Wood-carving in N. xxxviii.

In the dwelling N. xxxviii, which lay a short distance to the east (see plan, Plate 17), the main room, i, showed on three sides a sitting platform, four feet broad and fifteen inches high, faced with sun-dried bricks seventeen by twelve by three inches. There was found here a roughly carved round central pillar and a plain double-bracket, eight feet long and seven and a half inches wide, with ends curving upwards (see diagram). Mortises showed that, as in N. xxvi, there must have been a second double-bracket combined with this. In room ii a wooden pillar was discovered, five feet high and oval in section, with a longer axis of nine inches and the sides showing sixteen facets (see Fig. 69). The top, both in front and on the back, was decorated in rough bold chip-carving with a design showing a vase from which issued two long curving stems ending in broad leaves and fruits pendent, exactly after the style seen in the central panel of the double-bracket N. xxvi. iii. 1 (Plate XVIII).



Dead Toghraks on eroded sand-cone.

In the small and badly eroded dwelling, N. xxxix, a quarter of a mile to the north, a rectangular covering-tablet was found, carved in the rough and manifestly unfinished. On a 'witness' about fifteen feet high, close to camp, stood the small ruin N. xl, of which only a single room with fire-place and sitting platform on three sides had survived erosion. It was curious to note that a tamarisk-cone, rising some thirty yards to the west and also eroded at its foot, bore on its top dead Toghraks. These stood on a level about five feet higher than the floor of N. xl. They must have grown up when the sand-cone was quite low, just like those which now abound over the neighbouring area

(cf. Fig. 68). But owing to erosion the top of the cone now stood fully twenty-one feet above the immediately adjoining ground.

Subsequent use of ruins as sheep-pens.

I must note as a specially curious feature the frequent appearance of thick layers of sheep-dung at several of these ruins within what must have been living quarters. The fact seemed puzzling at first until, in the light of my subsequent observations at Mīrān, the 'Lou-lan' Site, and elsewhere, it became evident that these ruins, at some period subsequent to their abandonment, had been used to shelter flocks grazing in the jungle, which had grown up around them at a time when the summer flocks still reached this nearest portion of the old site. There were, however, no archaeological indications to aid us in determining that period, if only approximately, and calculations based on the conjectured rate of growth of the sand-cones, the age of the neighbouring wild poplars and the like, might be very misleading, seeing how different the determining factors may be, even in areas closely adjoining. But so much is certain, that the abandoned dwellings could have invited use by shepherds only as long as their ruins were in some state of preservation. It is also noteworthy that I found traces of such use only in the southernmost portion of the site. The reason for this distinction is made clear by what I shall have presently to record about the ancient terminal course of the Niya River.

Ruin N. xli and its surroundings.

On October 30 there remained only the clearing of the modest dwelling to the south, N. xli (for plan, see Plate 18), from which, on the first day of my return to the site, I had extracted three Kharoṣṭhī tablets.[1] Its scanty remains, badly eroded and showing also traces of recent burrowing, refused to yield more than another tablet, much decayed, and some miscellaneous small implements. Among these it may suffice to mention a small stick, N. xli. 008, likely to have been used as a pen, and a longer one, N. xli. 005, which, judging from its rounded and charred ends, had probably served as a fire-drill. But the surroundings of this ruin, as a careful inspection soon showed, were to reveal features of far greater interest. The panoramic view, taken from a sandy ridge to the east and reproduced in Fig. 75, will help to explain the details as well as to convey the general impression of the ground. All round the ruined dwelling there could still be traced lines of fences bordered by rows of poplars and enclosing small arbours and orchards. Only some seventy yards to the west there still stood a rectangle of dead mulberry-trees, raising their trunks to a height of ten feet or more, which had once cast their shade over a tank still clearly marked by a depression.

Foot-bridge across ancient river-bed.

The stream from which the canal once feeding this tank must have taken off was not far to seek; for behind the nearest ridge of sand westwards, the very one from which the photographic panorama was taken, there still lay the remains of a foot-bridge, traceable for about ninety feet and stretching across an unmistakable ancient river-bed, as clearly seen in Fig. 75. Of the trestles which had carried the bridge two still stood upright, near what must have been the eastern head of the bridge, one of the posts rising to a height of over ten feet. The extant portion of the bridge was formed near its eastern end by one large flattened trunk of poplar (*Populus alba*), one and a half feet broad and thirty-nine feet long, as far as it could be cleared of the sand which covered what was once the right river bank. This part of the footway was continued by three narrow trunks, about forty feet long, lying side by side and once, no doubt, joined together. Beyond there could be traced detached fragments of trunks for another ten feet. They lay on the eroded slope which leads down from the west to the depression marking the lowest part of the ancient river-bed. The bottom of the bed lay fifteen feet below the level indicated by the extant eastern end of the bridge.

Course of ancient river-bed traced.

At a distance of sixty-eight feet from the westernmost portion of the footway now extant, the slope terminated in a steeply eroded bank of hard loess. This, clearly shown by the photograph along with several similar and parallel banks above it, has undoubtedly been 'washed out' and

[1] Cf. above, p. 213.

73. PANORAMIC VIEW OF INTERIOR OF FORTIFIED VILLAGE AT BILÊL-KONGHAN, FROM CIRCUMVALLATION ON NORTH-EAST.

A marks position of gate towards south-east.

74. PANORAMIC VIEW OF RUIN L. B. IV, LOU-LAN, SEEN FROM EAST.

75. PANORAMIC VIEW TAKEN FROM SANDY RIDGE TO WEST OF RUINED DWELLING N. XLI, NIYA SITE, SHOWING REMAINS OF N. XLI AFTER EXCAVATION (A), ANCIENT TANK WITH SURROUNDING ARBOUR (B), FOOTBRIDGE STRETCHED ACROSS DRY RIVER-BED (C), AND DEAD ORCHARDS BEYOND (D).

The position from which the panorama was taken, on the tamarisk-covered top of a sandy ridge, is marked in Plan Pl. 18. The view extends from the S.E. (left) to W. (right). In the foreground behind the ruined dwelling N. XLI (A) and tank (B) are seen the remains of dead trees and fences marking lines of ancient avenues and gardens. The height of the trestles still upright, which once supported the bridge (C), is shown by the figure of a man. Beyond the left bank of the dry river-bed are remains of dead orchards (D) and in the distance those of an ancient vineyard (E, traced in 1913). In near background, to south and south-west, rise tamarisk-cones, and in the distance high ridges of dunes.

undercut by wind action. But the wind itself is likely to have been guided or at least influenced by the direction of the old river bank, running here, like the terminal bed still traceable below Tülküch-köl, a little to the west of north. To the north-west of the bridge rows of garden-trees with remains of fences could be made out for over a hundred yards. Immediately beyond there appeared a well-marked depression which, as seen from the panoramic station, had the appearance of a large rectangular tank or reservoir. On examination it proved about a hundred yards across from north to south. Accompanied by Surveyor Rām Singh I then proceeded to follow the dry river course downwards (see site-plan in Plate 7). After continuing for less than half a mile in the direction above indicated, the ancient bed was found to make a sharp bend to the south-west. With this bearing it could be traced for about a mile across an area of curiously open ground, almost clear of vegetation and showing, besides great patches of bare loess soil, only low dunes eight to ten feet high. The contrast with the belt of closely set tamarisk-cones passed further south and seen in the panorama was striking. In places the ancient bed was completely covered up by drift sand, but at short intervals it emerged again, recognizable by its steep-cut banks.

Terminal course of ancient river.

Then the bed resumed again its north-westerly direction, and when after crossing it we had ascended a big sandy ridge westwards to a height of fifty feet, we could see it joining a broad valley-like depression stretching far away to the north-west, with living tamarisks and wild poplars. Immediately to the north there lay before us scattered groups of large Toghraks, evidently of great age but still flourishing. From where we stood the view extended over miles of this wide silent valley, flanked by big 'Dawāns' of dunes rising up to two hundred feet or more and appearing over the flat sandy waste like chains of true hills. One of them was the same which had limited our view westwards while at work on the northern and central group of ruins. It was impossible to mistake here those great riverine ridges of sand which I knew so well to accompany the terminal courses of all rivers losing themselves in the desert, and which I was able subsequently to study with particular clearness, when crossing in February, 1908, the Taklamakān from north to south towards the dead delta of the Keriya River.[2] Nowhere could the Surveyor's sharp eyes or my own, aided by strong binoculars, see any trace of ruins or ancient cultivation. Ibrāhīm, too, who stood by my side, declared that he had vainly searched this great Nullah and others west of it for several marches in the hope of more ruins. Here was clearly the depression into which the waters of the Niya River at the time of summer floods had once emptied themselves, below the head of the canals irrigating the ancient oasis. The vigorous growth of wild poplars showed that even now a course of subsoil water deep down must find its way to this desolate valley. Moreover, at a point to the north-east where we again struck the old river-bed, I found that the light sand covering its banks revealed in places shrivelled trunks of dead Jigda trees and low stubble of withered reeds. But certainly this bed had seen no water for long ages, and over all this strange ground desiccation was written quite plainly.

Departure from Niya Site.

With the survey of the short portion of the ancient river course just described my work at the site was concluded, and nightfall of October 30 saw my camp shifted back once more to the shrine of Imām Ja'far Sādiq and thus to the purlieus of the living. The great and almost uninterrupted toil of the twelve days spent among the ruins of the deserted oasis had been rewarded by finds so abundant that I felt less keenly the strict limitation of time which regard for the manifold tasks awaiting me far away eastwards imposed upon me. It would have been of geographical and antiquarian interest to determine the exact course followed by the river about the third century A.D., as far as possible both above and below the southernmost group of ruins, and also to trace with

[2] Cf. for these high ridges along the terminal portions of the Keriya, Niya, Endere Rivers the map of *Ancient Khotan*; also *Ruins of Khotan*, p. 330; *Ancient Khotan*, i. pp. 383 sq.; and *Desert Cathay*, i. p. 422; ii. 385, 401, etc.

complete certainty the easternmost limits of the area once irrigated. But if I had to forgo these inquiries which might have cost precious days without perhaps yielding an adequate return in results, there was ample compensation in the thought that my observations and finds had confirmed in all essentials the conclusions to which my previous explorations had led me.

Historical conclusions regarding site.

These conclusions have been set forth so fully in Chapter XI of *Ancient Khotan*, which deals with the Niya Site,[3] that the briefest mention will suffice here of the main points which have received additional support by the results of my fresh explorations. In the light of these it can still be asserted with confidence that the ruins belong to a widely scattered and mainly agricultural settlement which flourished in the third century A.D. and was abandoned about the time when Chinese supremacy in the Tārīm Basin came to an end towards the close of that century. The discovery in the refuse heap of N. XIV of the interesting wooden labels with dedicatory Chinese inscriptions to members of a local royal family, proves on the one hand the correctness of the Chinese records which mention the separate existence of the small kingdom of Ching-chüeh down to the middle of the third century A.D. in a position clearly corresponding to the tract watered by the Niya River.[4] On the other hand, the same find illustrates again the important influence which Chinese administration and culture exercised here at that period.[5]

Chronology of site.

It is true that the fresh excavations did not yield another dated document like the Chinese wooden record, N. XV. 326, which had definitely settled the main question as to the chronology of the ruins.[6] But apart from the collateral evidence supplied by the fact that the same royal names which were found on Kharoṣṭhī documents from N. XV appear again and again on the tablets brought to light in the newly discovered ruins, there are two negative proofs which support the approximate date previously assumed for the abandonment of the site. In view of the extent of the fresh excavations these may claim additional weight.

Total absence of paper.

In the first place it is noteworthy that none of the ruins opened, far more numerous though they are than those of 1901, has yielded the smallest scrap of paper. The chronological significance of this fact is much increased by the observation that at the site of 'Lou-lan', north of Lop-nōr, which, as my subsequent explorations showed, must have been occupied down to about the middle of the fourth century A.D., documents on paper, both Chinese and Kharoṣṭhī, were relatively abundant by the side of others written on the older material, wood. Considering that the Niya Site lay close to, if not actually on, the ancient trade route leading from Kan-su to Khotan and westwards, the only probable explanation for this striking absence of paper must be sought in the fact that the Niya Site was abandoned somewhat earlier than that of Lop-nōr and before the use or manufacture of paper had spread from China sufficiently far to the west. Equally telling is the numismatic evidence. The ten Chinese copper coins found near the excavated ruins, or picked up from eroded ground elsewhere at the site, comprise only pieces which were current under the Later Han dynasty (A.D. 25–220) or immediately after its close.[7] The analysis of the coin finds made on my former visit had yielded exactly the same result.[8]

Numismatic evidence.

The essential observation still holds good, that the local administration of the tract was carried on

[3] Cf. in particular *Ancient Khotan*, i. pp. 368 sqq., for conclusions concerning historical matters, and i. pp. 382 sqq. for those bearing on questions raised by the physical conditions of the site.

[4] See above, p. 219 and below.

[5] Cf. *Ancient Khotan*, i. pp. 372 sq.

[6] See *ibid.*, i. p. 370.

[7] As the list in Appendix B shows, the series is made up of two coins showing the legend *Ho chuan* as issued by Wang Mang (A.D. 9–22; for specimen see Pl. CXL); two *Wu-shu* pieces of the type ascribed to Kuang Wu ti (A.D. 25–57); and three small coins without legends belonging to clipped *Wu-shu* issues associated with the reign of Hsien ti (A.D. 189–220).

[8] Cf. *Ancient Khotan*, i. p. 369, note 29; also p. 577. The proportion between the various types represented was approximately the same as indicated in the preceding note; but no *Ho chuan* were previously found.

in an Indian language and script. In spite of the difficulties attending the decipherment and publication of the Kharoṣṭhī documents from the site, it seems safe to state that their early Prākrit, like that of the Dhammapada version contained in the birch-bark fragments of the Dutreuil de Rhins MS., reveals close relationship in phonetic and other features to the dialects which can be shown to have prevailed in the extreme north-west of India from ancient times.[9] As to the script it is certain that the type of its Kharoṣṭhī characters is very closely allied to that represented in north-western India by the inscriptions of the Kuṣana period. But as long as the chronology of the latter remains beset by its present obscurities, it is rather Indian than Central-Asian historical research which benefits by the evidence implied in the palaeographic agreement.[10]

Language and palaeography of Kharoṣṭhī documents.

It still seems as tempting as before to recognize this use of Indian language and script for purposes of local administration as lending support to the old tradition, recorded by Hsüan-tsang, which tells of Khotan having received a large portion of its early population by immigration from Takṣaśilā, the Taxila of the Greeks, in the extreme north-west of India.[11] But it must be clear also that the aspects of the problem have been widened and to some extent changed by the results of my subsequent explorations which have proved the regular use of Kharoṣṭhī writing and an early Prākrit for administrative purposes to have prevailed about the same period as far east as the Lop-nōr region.[12] We are thus faced by the question whether the far-spread use of these was not partly a result also of the political influence which the powerful Indo-Scythian dominion established both north and south of the Hindukush seems to have exercised for a time in the Tārīm Basin during the early centuries of our era,[13] or of that even more important cultural influence which must have accompanied the Buddhist propaganda carried eastwards from the Oxus region about the same period. The time has not yet arrived for attempting a definite answer to this and kindred questions.

Far-spread use of Indian language.

In the Detailed Report on my former explorations I have already discussed at length the great change in physical conditions to which the ruined site bears such eloquent testimony, and which must interest the geographical student quite as much as the archaeologist.[14] I have emphasized there the importance attaching to 'the shrinkage by a distance of at least fifteen miles of the river's final course, and of the belt it fertilizes'. The progress of general desiccation alone supplies an adequate explanation for this shrinkage. The evidence afforded by this feature appeared to me all the more conclusive because, in the case of the Niya Site, no question could possibly arise as to the source of its water-supply; moreover it was here possible to keep the comparison of the ancient and modern

Change of physical conditions proved by site.

[9] Cf. J. Bloch, *Le dialecte des fragments Dutreuil de Rhins*, *J.A.*, 1912, xix. pp. 331 sqq.

[10] These obscurities are sufficiently illustrated by the controversies still proceeding as to the relative grouping of the several Indo-Scythian rulers known to us in India by their coins and contemporary inscriptions, and as to the commencement of the era or eras in which the latter are dated (cf. e.g. Mr. Kennedy's articles, *The Secret of Kanishka*, *J.R.A.S.*, 1912, pp. 665 sqq.; Oldenberg, *Zur Frage nach der Aera des Kaniṣka*, *Nachrichten der K. Gesellschaft der Wissenschaften*, Göttingen, 1911, pp. 427 sqq. = *The Era of Kaniṣka*, in *Journal of the Pali Text Society*, 1912, pp. 1–18).

I doubt whether in these discussions the chronological evidence afforded by the Kharoṣṭhī documents from Niya has received the attention it deserves. The exact dating, A.D. 269, of the contemporary Chinese record, N. xv. 326 (see *Ancient Khotan*, i. p. 370), definitely assigns them to the latter half of the third century of our era. It is obvious that the close agreement which their writing shows with the characteristic palaeographic features of the inscriptions of Kaniṣka and his undoubted successors, must raise serious doubts as to the correctness of a recent theory which would make Kaniṣka's reign commence in the first half of the first century B.C. It is very unlikely that a script, cursive in its very character, should appear in written documents with practically the same features which it showed three centuries earlier in epigraphic records. This is not the place to indicate other reasons, chiefly archaeological, which make me inclined to accept a much later dating of Kuṣana rule in India.

[11] Cf. for a critical analysis of this local tradition, *Ancient Khotan*, i. pp. 163 sqq.

[12] See below.

[13] Cf. *Ancient Khotan*, i. pp. 55 sq. To the references there given must now be added M. Chavannes' translation of a notice in the Later Han Annals, *T'oung-pao*, 1907, p. 205.

[14] See *Ancient Khotan*, i. pp. 383 sqq.

conditions quite clear of any arguments dependent on the amount of available water, methods of irrigation, etc., i.e. factors which here, as elsewhere in the Tārīm Basin, still await systematic survey by a competent irrigation engineer. At the same time I thought it necessary to point out that while this shrinkage of the water-supply resulting from desiccation 'fully explains why the ancient site was never reoccupied, it does not prove that the original abandonment was directly and solely due to it'. Nor could I neglect to add the warning that 'as in most historical changes the causes [for that abandonment] may have been far more complex than the modern inquirer is apt to assume'.

Uncertainty as to cause of abandonment.

I must still maintain this distinction between the definitely proved case of desiccation and the uncertainty which surrounds the circumstances in which the abandonment of the ancient oasis actually took place. The interesting account which Prof. Huntington has given of his short visit to the site in 1905, brings out, indeed, very clearly the fact that the Niya River in its present size and condition could not so much as reach, much less irrigate, the extensive area of ancient cultivation marked by the ruins.[15] But I do not find in the observations there recorded anything to prove the implicit assumption which would attribute the abandonment of this settlement towards the close of the third century A.D. directly to a gradual failing of irrigation. Nor have my own renewed explorations furnished definite evidence for settling the question on a critically safe basis. But some of their results have a sufficiently direct bearing to deserve a brief collective review here.

Evidence of archive hidden in N. xxiv.

In the first place attention is due to the peculiar conditions in which the small hidden archive of N. xxiv was discovered. From the details fully set forth above it may be considered certain that the last occupant of the residence in question had been obliged to leave his home in an emergency, and not on account of a gradual abandonment of the oasis such as would necessarily follow the prolonged failure of irrigation. What particular emergency caused this hurried departure we are not likely ever to learn, nor what prevented the owner's return. Where historical knowledge is so limited, the range of possible explanations—war, insecurity, pestilence, fiscal oppression, etc.—must be wide. Instead of indulging in conjectures, we should learn from such an instance the need of caution in our inferences where the chances of human affairs in a distant past are in question.

No proof for gradual abandonment of site.

It is an argument of considerable weight for the point at issue that the extensive range of ruins excavated failed to reveal the slightest archaeological indication that the abandonment of different portions of the ancient oasis had taken place successively. Difficulties about irrigation, as illustrated by numerous modern instances, including the typical case of 'Old Domoko', would certainly make themselves felt first at the outlying parts of the canal system, as duly pointed out by Prof. Huntington. But though the length of the area from south to north over which structural remains have been carefully explored, extends now to over twelve miles, nothing has come to light to warrant the suggestion that the finds at the northernmost ruins date from an earlier period than those yielded by the ruins at the other end of the old oasis. The evidence against such an assumption may claim special weight because it is furnished also by documents with exact dates in regnal periods which, as far as our present knowledge goes, are uniformly represented over the whole area.

No cutting of dead trees.

In this connexion it is also of importance to mention that nowhere among the northern group of ruins, nor, as a matter of fact, anywhere else on the site, did I come across any of those stumps of cut garden- or fruit-trees which are such significant mementos at oases gradually abandoned. Where the cultivated area has undergone gradual shrinkage those holding the lands still under

[15] See *Pulse of Asia*, pp. 203 sqq. It may be as well to state here that Prof. Huntington, when writing this account, was not acquainted with the details as to the extent, etc., of my explorations of 1901, as described in *Ancient Khotan*. In the absence of a detailed site-plan, such as Plate XXVII gives there, he would necessarily find it difficult to make sure of the position of the ruins to which my work then extended. Nor could old Abdulla, to whose humorous confession he refers on p. 201, help him much, considering that I dispensed with this wily 'guide's' services after the first three days.

irrigation invariably turn to the arbours or orchards of the abandoned area for dead trees to supply handy timber and fuel. I have noticed the identical process wherever deserted lands and homesteads remained within easy reach of settlers still continuing the struggle, at sites as far apart as 'Old Domoko' and the outlying parts of Nan-hu near Tun-huang.[16] Yet though all through the Niya Site the trunks of ancient poplars and fruit-trees, whether erect or fallen, abounded, I found no evidence to show that they had suffered by the hand of man.

Occupation of southernmost ruins as sheep-pens.

The fact that only at the southernmost group were there signs of ruins having subsequently served for sheep-pens, might at first sight appear a distinction resulting from prolonged occupation. But in reality it merely proves that by the time when the abandoned oasis came to serve as a grazing-ground, those indispensable provisions for a shepherd station, proximity and sufficiency of water, were obtainable at its southern end alone. The immediate vicinity of the ancient river-bed fully explains this. As far as this point it is likely to have received the water of summer floods even centuries after cultivation was abandoned. Even now, as we have seen, a good deal of tamarisk and wild poplar growth survives near the southernmost ruins, and it is quite possible that the period when the deserted houses served as shelters for flocks was separated by a long interval from the time of their abandonment as actual homesteads.

Possibility of lateral shifting of river's terminal course.

Finally, attention may be called to another physical change, apart from desiccation, which might have brought about the desertion of the ancient oasis. I mean the possibility, always to be faced at such terminal oases, that irrigation was interfered with or stopped by a great lateral shifting of the river's course. In my previous discussion I pointed out the frequency of such deltaic changes at the end of rivers which lose themselves in the desert.[17] Now from this point of view some antiquarian value attaches to the unmistakable traces left by the ancient river-bed where it skirts the southern end of the site. Lying exactly in the continuation of the present terminal bed, as it passes out below Tülküch-köl, they make it difficult to believe that the river could have suffered here so serious a diversion as to render irrigation for a time impossible. Also the hill-like ridges of high sands which give to this terminal part of the riverine belt quite the character of a well-defined valley, seem to preclude this assumption. They have been built up by the action of the river itself, by deposits of fine silt it has brought down through long ages, and are, no doubt, of ancient formation.[18]

Evidence for river shifting absent.

If then the desertion of the oasis had been the result, directly or indirectly, of such a lateral shift of the river-bed we should have to look for the place of its occurrence at some point higher up. To the south-east of Imām Ja'far Sādiq I found, indeed, a succession of wide salt-encrusted depressions, parallel to the river's terminal course and in part still marshy, which represent the beds left behind by such changes. But, of course, nothing is known of their chronological sequence. The nearest of them, known as Chawal-köl (see Map No. 37), lies in direct continuation of the channel which at the time of my visit carried water to the tiny cultivated patch of Kapak-askan. That the Niya River's terminal course must have been always liable to the temporary changes of bed, which are a feature observed at the end of all rivers in this region,[19] may be considered certain. But in the absence of direct historical records, we can never hope to know whether it was such a digression which threatened the water-supply of the ancient oasis towards the close of the third century, or why human activity was unequal to warding off the resulting calamity.

This brings me in conclusion to mention again the fact already emphasized in my former dis-

[16] Cf. *Ancient Khotan*, i. p. 458; *Deser Cathay*, ii. p. 86.

[17] Cf. *Ancient Khotan*, i. pp. 383 sqq.

[18] The possibility that these high ridges of sand rest towards the west on permanent elevations of the ground, similar to the low hill range cropping out at Imām Ja'far Sādiq (see *Ancient Khotan*, i. p. 313), should not be lost sight of.

[19] Cf. for actual instances *Ancient Khotan*, i. pp. 383 sq.; also for my experience at the Keriya River end in 1908, *Desert Cathay*, ii. pp. 391 sqq.

OBJECTS FOUND AT ANCIENT CEMETERY NEAR N. X

N. x. 001. Frs. of dark brown-red fabric, loose but even texture, with others of redder colour and more closely woven. Very brittle. Found near human bones to E. of 'Mazār', W. of N. x. Gr. M. $4\frac{3}{4}'' \times 4\frac{1}{2}''$.

OBJECTS EXCAVATED AT, OR FOUND NEAR, N. XII

N. xii. 01. Fr. of rectang. under-tablet. *Obv.* eight ll. Khar. almost effaced. *Rev.* blank. Broken across. $3\frac{3}{4}'' \times 2\frac{3}{8}'' \times \frac{3}{8}''$.

N. xii. 001. Bronze ring with flat bezel. Incised design. Cf. *Anc. Khotan*, Pl. LII, N. 0014. g, and N. xii–xxvii. 002–3. Diam. $\frac{11}{16}''$; bezel $\frac{5}{8}'' \times \frac{3}{8}''$. Pl. XXIX.

N. xii. 002. Bronze ring with hollow bezel; stone missing. Diam. $\frac{9}{16}'' \times \frac{5}{8}''$.

N. xii. 003. Leaf-shaped piece of sheet bronze with hole at upper end. Possibly from scale armour. Cf. N. xii. 0011; xiv. 009–11. $\frac{13}{16}'' \times \frac{3}{8}''$. Pl. XXIX.

N. xii. 004. Bronze wire ring (ear-ring?) of which ends are not joined. Boss opposite opening. Diam. $\frac{3}{8}'' \times \frac{7}{16}''$.

N. xii. 005. Glass bead, blue, discoid. $\frac{1}{8}'' \times \frac{1}{12}''$.

N. xii. 006. Glass bead, light blue, roughly ring-shaped. $\frac{1}{4}'' \times \frac{1}{8}''$.

N. xii. 007. Bronze rod, broken each end. $2\frac{1}{8}'' \times \frac{1}{8}''$.

N. xii. 008. Bronze ring with flat bezel. Design incised. Illegible. Cf. *Anc. Khotan*, Pl. LII, N. 0014. g. Diam. $\frac{3}{4}'' \times \frac{5}{8}''$.

N. xii. 009. Rough jade chip, somewhat resembling arrowhead, but not artificial. $2\frac{1}{4}'' \times \frac{3}{4}'' \times \frac{3}{8}''$. Pl. XXXVI.

N. xii. 0010. Glass and stone beads: one gilded glass; eight blue glass, rings, discoid and faceted; five black paste, flattened spheroids; three green glass, rings, fused together; three white, one bone, two glass; one yellow glass. Cf. *Anc. Khotan*, Pl. LXXIV. N. 0014. d and N. 0020. a. (Gilded glass beads occur fairly frequently throughout the Roman Empire and seem to have been manufactured in the south of the Nile Valley. See Woolley and MacIver, *Karanóg*, p. 74.)

N. xii. 0011. Sq. of thin sheet bronze, pierced near middle of one edge; prob. piece of scale armour. $\frac{9}{16}''$ sq.

N. xii. 0012. Fr. of corroded bronze, shapeless. Roughly, $\frac{3}{4}'' \times \frac{3}{16}'' \times \frac{1}{16}''$.

N. xii. 0013. Strip cut from sheet bronze, *c.* $\frac{1}{32}''$ thick. Pierced at each end. Rough. Prob. a rivet, as e. g., in wooden bowl N. xxi. 2, q. v. $1\frac{1}{8}'' \times \frac{3}{8}''$.

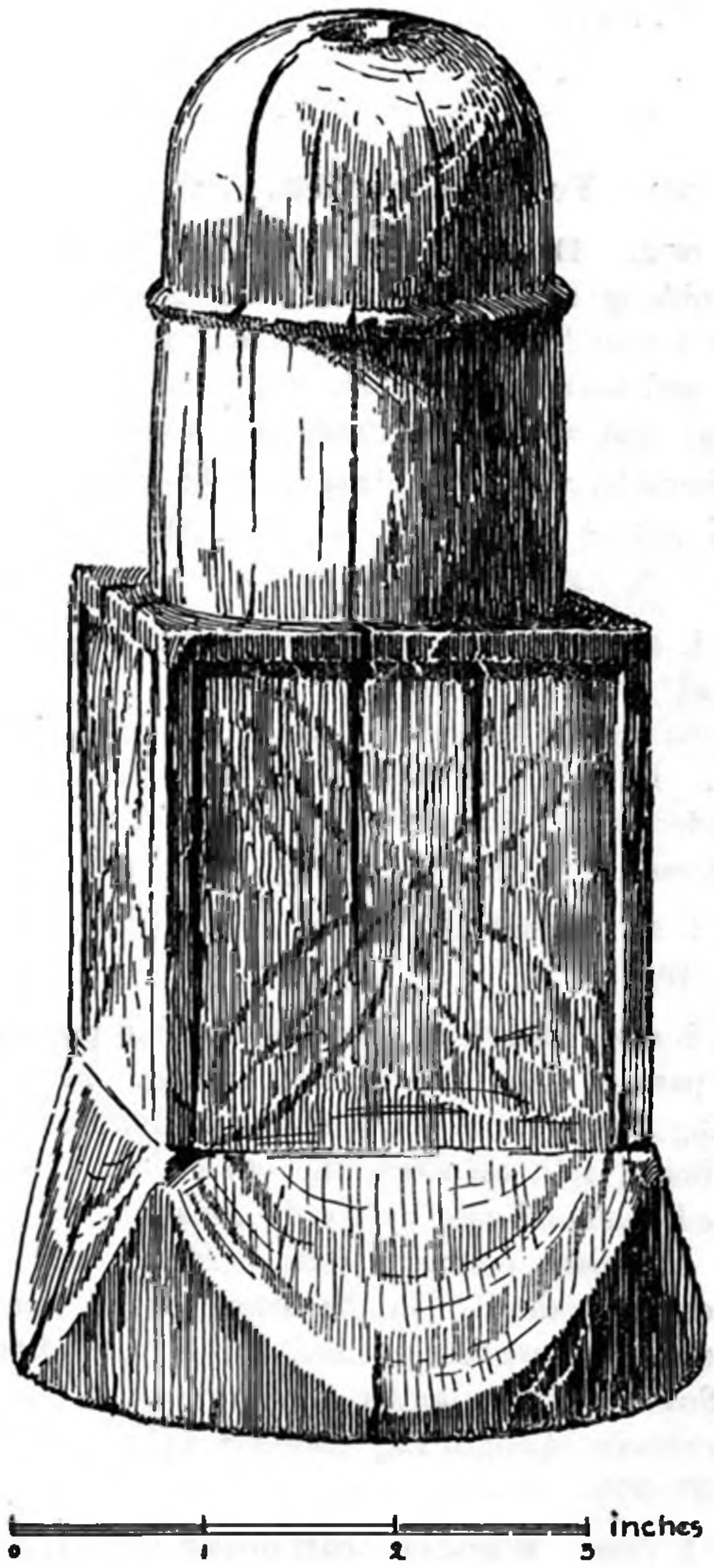
N. xii. 0014. Bronze ring with hollow bezel; stone missing. Diam. $\frac{3}{4}'' \times \frac{5}{8}''$.

N. xii. 0015. Bronze rod, splayed out end, broken off, round in section. Much corroded. Across end *c.* $\frac{5}{8}''$; diam. rod $\frac{1}{8}''$.

N. xii. 0016. Ring of bent bronze wire. Ends not quite joined. Section lozenge-shaped. Diam. $\frac{5}{8}''$ to $\frac{1}{2}''$.

N. xii. 0017. Ring of bent bronze wire. Ends not quite joined. Section round. Diam. $\frac{5}{8}'' \times \frac{3}{4}''$.

N. xii. 0018. Sieve (*Sapi*) for clearing milk. Circumference made of withies bound with string, and covered with yellow felt sewn. Centre covered with network of coarse vegetable fibre, yellow and brown. This broken away in parts. Diam. $9\frac{3}{4}''$. Pl. XXVIII.



Carved Wooden Block N. v. xvi. 001.

N. xii. i. 1. Fr. of label-like tablet with pointed end. *Obv.* two ll. Khar. faded, but clear. *Rev.* blank. Good condition. $3\frac{1}{4} \times 1''$.

N. xii. i. 2. Wooden double bracket. Carved in relief. *Side ornament*: From top, plain moulding. Band of saw-

tooth pattern $2\frac{1}{4}''$ wide. In middle of this four-petalled lotus between upright zigzag ornament. Plain fillet. Moulding, of long billets divided by bevelled squares. Plain modillions and abacus. *Under-ornament*: each end same. At end two plain and one billeted moulding. Oblong lotus with six double petals, and six sepals; rosette corolla of eight petals. Plain border round all four sides. Rounded cross-band of saw-tooth pattern. Cavetto, leading to impost. Diam., mortise, 6″. $4' 11'' \times 10\frac{1}{2}'' \times 7''$ to $3\frac{1}{4}''$. Cf. *Anc. Khotan*, Pl. LXIX. Pl. XVIII.

OBJECTS PICKED UP BETWEEN N. XII–XXXV

N. XII–XXVI. 001. Frs. of buff muslin. Cf. L.B. IV. ii. v. 003. Approx. $10'' \times 8\frac{1}{2}''$. Material: sheep's wool, determined by Dr. Hanausek.

N. XII.–XXVII. 001. Flat brass wire, thin strip of; broken and twisted together. $\frac{1}{16}'' \times \frac{1}{50}''$; length, about 4″ (?).

N. XII–XXVII. 002. Bronze ring like N. XXX–XXXII. 001. Flat bezel. Linear design in dotted edge. Diam. $\frac{5}{8}'' \times \frac{11}{16}''$. Pl. XXIX.

N. XII–XXVII. 003. Bronze ring like N. XII–XXVII. 002. Flat bezel. Linear design within incised oval. Diam. $\frac{11}{16}'' \times \frac{3}{4}''$. Pl. XXIX.

N. XII–XXXV. 001. Bronze buckle, of which iron tongue is lost. Cf. Khot. 0050. Ring circular with rectangular projection to hinge; from circumference project seven knob-ended rays. Mark of iron on back. From point to point $1\frac{9}{16}''$; inside diam. $\frac{1}{2}''$. Pl. XXXVI.

OBJECTS EXCAVATED IN N. XIII

N. XIII. 001. Fr. of yellow felt, much torn. $1' \times 9\frac{1}{2}''$.

N. XIII. 002. Bronze seal found by Rustam. Square, with oblong sides, and a flat half-hoop handle behind. Corners rounded. Condition fair. Face, considerably worn and corroded, contains four Chinese characters, in angular seal writing, of which only two on R. hand are decipherable, viz. — — *chang yin* 長印, 'seal of the senior official of — —' [Mr. L. C. Hopkins]. H. $\frac{5}{16}''$; $\frac{3}{4}''$ sq. Pl. XXIX.

N. XIII. i. 1. Double-wedge tablet, opened. Cov.-tablet: *Obv.* $2\frac{7}{8}''$ from sq. end seal cav. ($1\frac{1}{4}'' \times 1\frac{3}{16}''$). Seal complete, with same device as N. XIII. ii. 10. By sq. end, one l. Khar. By hole, usual character. *Rev.* blank.

Under-tablet: *Obv.* three ll. Khar. *Rev.* one l. Khar. by sq. end. $13\frac{1}{2}'' \times 2\frac{1}{8}'' \times \frac{3}{4}''$ to $\frac{3}{8}''$.

N. XIII. i. 2. Label-like tablet with hole at wedge-shaped end. Blank. $3\frac{3}{8}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

N. XIII. i. 001. Part of carved wooden panel. Probably part of chair (see N. XIII. i. 004). Much warped. Carving rude and not neatly finished. Both ends and one side intact, split off along the other side. The field is crossed diamond-wise by bands consisting of four-sided bead ornament between plain borders, each of which crosses two others. In the lozenges and triangles left between them are four-petalled and sepalled flowers and half-flowers. Plain border at either end, in one of which a dowel-hole. Length $16\frac{1}{8}''$ (borders $2\frac{1}{4}''$ and $1\frac{5}{8}''$) $\times 3\frac{3}{4}'' \times \frac{5}{8}''$. Pl. XIX.

N. XIII. i. 002. Wooden crutch-like object, carved out of one piece. Notches at sides and end of crutch, groove round stem (where broken). Probably a 'Chuluk' for tying up lambs. Cf. N. XIV. iii. 0024; L.A. I. iv. 009; L.B. IV. ii. 009. Stick $3\frac{1}{4}'' \times \frac{3}{8}''$; cross-piece $2\frac{3}{16}'' \times \frac{3}{4}''$ to $\frac{3}{8}''$. Pl. XXVIII.

N. XIII. i. 003. Wooden box, hollowed out of block. Half-way up, long sides are pierced each with a pair of holes, string-worn, coinciding for fastening cords. On one side, between holes, semi-circular notch is cut out of edge. Round inside of edge runs rabbet $\frac{1}{16}''$ deep $\times 1\frac{1}{4}''$ wide, for lid. Ends split. Inside $12\frac{3}{4}'' \times 3\frac{7}{8}'' \times 3\frac{1}{4}''$; outside $14\frac{5}{8}'' \times 4\frac{1}{2}'' \times 3\frac{1}{2}''$. Fig. 47.

N. XIII. i. 004. Back L. leg of wooden chair. Cf. *Anc. Khotan*, Pl. LXVIII. Lower part is plain with concave surface. Upper part on broad side has ornament as N. XIII. i. 001 (which prob. belonged to it). Narrow side decorated with pairs of triangles cut out. Upper ten pairs point down; lower eight point up. Between them a four-petalled lotus, outlined but not cut out. In side mortise part of panel with border decorated with lozenge pattern. End mortise empty. $23\frac{1}{2}'' \times 3\frac{1}{2}'' \times 2\frac{3}{4}''$. Pl. XIX.

N. XIII. i. 005. Part of wooden chair, same as N. XIII. i. 004. Strip off opposite leg, and part of side panel still held to it by dowel. Leg has same decoration. Panel has in centre circular flower with four incised petals, and relief lozenges in field around. One corner projects beyond finished edge. Panel $9\frac{3}{4}'' \times 3\frac{3}{4}'' \times \frac{7}{8}''$. Pl. XIX.

N. XIII. ii. 1. Rectang. double tablet. Complete. Opened. Cov.-tablet: *Obv.* Seal cav. ($2\frac{3}{4}'' \times 1\frac{5}{16}''$); seal in pink mud with no discernible impression. Across one end two ll. Khar., faint. *Rev.* eight ll. Khar., clear.

Under-tablet: *Obv.* eight ll. Khar., clear. *Rev.* two short ll. faint, first in Brāhmī, second in Khar. $7\frac{1}{4}'' \times 3\frac{5}{8}'' \times \frac{1}{2}''$.

N. XIII. ii. 2. Rectang. double tablet; complete; opened. Cov.-tablet: *Obv.* Seal cav. ($1\frac{1}{8}'' \times 1\frac{5}{8}''$) with remains of seal. Impression destroyed. Across one end two ll. Khar. *Rev.* five ll. Khar., black.

Under-tablet: *Obv.* eight ll. Khar., black. *Rev.* blank. Good condition. $6\frac{3}{4}'' \times 2\frac{3}{4}'' \times \frac{5}{16}''$.

N. XIII. ii. 3. Oblong tablet. In each long side a V-shaped notch is cut. No writing visible. $4\frac{1}{2}'' \times 3\frac{5}{16}'' \times \frac{5}{16}''$.

N. XIII. ii. 4. Double-wedge tablet, complete, unopened.

Seal cav., $1\frac{1}{8}'' \times 1\frac{5}{16}''$, empty; strings intact. *Obv.* of cov.-tablet much encrusted; one l. Khar. visible on each side of cav. and single character by hole. *Rev.* of under-tablet: one short l. Khar. at sq. end. Hard and well preserved. $8\frac{3}{4}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$ to $\frac{5}{8}''$.

N. xiii. ii. 5. Rectang. double tablet, complete, opened. Cov.-tablet: *Obv.* Seal cav. $1\frac{3}{8}'' \times 1''$. Seal destroyed. Blank. *Rev.* one l. Khar., very faint.

Under-tablet: split. *Obv.* four ll. Khar. *Rev.* blank. Much sand-encrusted. $5\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

N. xiii. ii. 6. Double-wedge tablet. Complete. Unopened. Cov.-tablet: *Obv.* $1\frac{5}{8}''$ from sq. end seal cav. ($1\frac{9}{16}'' \times 1\frac{1}{4}''$) with string and seal intact. Device as N. xiii. ii. 10, q. v. By sq. end one l. Khar. On point side of cav. one l. Khar. Usual character near hole.

Under-tablet: *Rev.* one l. Khar. by sq. end. $14'' \times 2\frac{1}{8}'' \times \frac{7}{8}''$ to $\frac{3}{8}''$. Very good condition. Pl. XXIV.

N. xiii. ii. 7. Rectang. double tablet, unopened. Remains of seal, but impression quite destroyed. Much sand-encrusted, but traces of Khar. writing across one end of cov.-tablet. Wood hard. $7\frac{5}{8}'' \times 2\frac{5}{8}'' \times \frac{7}{8}''$ to $\frac{3}{8}''$.

N. xiii. ii. 8. Rectang. double tablet, complete, opened. Cov.-tablet: *Obv.* Seal cav. ($2'' \times 1\frac{1}{8}''$) with two impressions totally defaced. On one end traces of writing. *Rev.* eight ll. Khar. faint.

Under-tablet: *Obv.* eight ll. Khar., faint. *Rev.* blank. Much encrusted. $6\frac{7}{8}'' \times 2\frac{3}{4}'' \times \frac{3}{8}''$.

N. xiii. ii. 9. Double-wedge tablet. Opened. Cov.-tablet: *Obv.* $1\frac{3}{4}''$ from sq. end seal cav. ($1\frac{1}{4}''$ sq.) with seal intact with same device as N. xiii. ii. 10, q. v. By sq. end one l. Khar. Point side of seal one l. Khar. Near hole usual character. *Rev.* blank.

Under-tablet: *Obv.* three ll. Khar. *Rev.* one l. Khar. by sq. end. $12\frac{3}{4}'' \times 2'' \times \frac{3}{4}''$ to $\frac{1}{2}''$.

N. xiii. ii. 10. Double-wedge tablet. Complete. Unopened. Cov.-tablet: *Obv.* $2\frac{3}{8}''$ from sq. end seal cav. ($1\frac{1}{8}'' \times 1''$) with intact impression of oval stone in plain setting sq. with rounded corners. Nude male fig. $\frac{3}{4}$ R. standing with weight on L. foot, R. leg slightly drawn back. L. arm stretched forward with raised hand. R. arm behind, bent at elbow, hand holding stout staff which rises as high as shoulder. Heavy wings reaching to edge of stone. Head profile R., beardless, hair in heavy roll over forehead. To R. a small fig. facing L. stands under lifted arm of main fig. and with outstretched hand seems to touch his thigh (?); only head and arm visible. Behind head of first fig. doubtful object, perhaps plume of helmet. For type of fig. cf. Genius Pop. Rom. on coins of Diocletian; Hill, *Greek and Roman Coins*, Pl. XV. 9. Strong classical style, stone prob. imported. Same device on N. xiii. i. 1, N. xiii. ii. 6, 9; N. xxiii. ii. 8. On sq. setting are traces of Khar. letters, very faint. By sq. end one l. Khar., point side of seal one letter Khar. By hole usual character; all faint.

Under-tablet: *Rev.* one short l. Khar. by sq. end. $12\frac{1}{2}'' \times 2'' \times \frac{15}{16}''$ to $\frac{9}{16}''$. Pl. XX, XXVII.

N. xiii. ii. 11. Portion of wedge cov.-tablet, transformed into detached seal-case with seal cav., $1\frac{1}{2}'' \times 1''$, empty. *Obv.* blank. *Rev.* three ll. Khar., faint. Hard but much encrusted. $3\frac{1}{8}'' \times 1\frac{11}{16}''$. Pl. XXVII.

N. xiii. ii. 12. Rectang. tablet with three notches in each of shorter ends. *Obv.* blank. *Rev.* three (?) ll. Khar., very faint. $2\frac{1}{2}'' \times 1\frac{5}{8}''$.

N. xiii. ii. 001. a–c. Fabrics. (*a*) Fr. of coarse fabric of pale khaki colour. $12\frac{1}{4}'' \times 8\frac{1}{2}''$.

(*b*) Fr. of firm thick wool (?) *darri* in stripes of buff and dark brown, interspersed with thin lines of red. $4\frac{3}{4}'' \times 5\frac{1}{2}''$.

(*c*) Fr. of very fine plain cream silk finely corded. $3\frac{7}{8}'' \times 1\frac{1}{2}''$.

N. xiii. ii. 002. One-edged iron spud or skewer with flat ring handle. Cf. T. W. end of Wall. 005 and 007. Length $6\frac{1}{4}''$; width of handle $2\frac{1}{2}''$. Pl. XXXVI.

N. xiii. iii. 1. Label-like tablet with hole at pointed end. *Obv.* two columns (6 and 7 ll.) Khar. *Rev.* blank. Writing faint, wood soft. $6'' \times 2\frac{3}{4}'' \times \frac{3}{8}''$.

N. xiii. iii. 2. Rectang. tablet. *Obv.* four ll. Khar. *Rev.* one l. Khar. in corner. Writing very faint and indistinct. Soft, badly split. $7\frac{5}{16}'' \times 2\frac{1}{4}''$.

N. xiii. iii. 3. Rectang. cov.-tablet, with empty seal cavity $1\frac{3}{16}'' \times 1''$. *Obv.* blank. *Rev.* five ll. Khar. very faint. Hard, but badly bleached and split. $8\frac{7}{8}'' \times 3\frac{3}{4}''$.

N. xiii. iii. 4. Rectang. under-tablet. Twisted, bleached; surface perished. No writing visible. $9\frac{1}{2}'' \times 2\frac{1}{2}'' \times \frac{1}{4}''$.

N. xiii. iii. 5. Label-like tablet, with hole at wedge-shaped end. *Obv.* two ll. Khar. near sq. end. *Rev.* blank. Good condition. $5\frac{3}{4}'' \times 2\frac{1}{4}'' \times \frac{3}{16}''$.

N. xiii. iii. 6. Label-like tablet with hole at pointed end; very roughly trimmed. *Obv.* three columns of 3 ll. each. Khar., part clear, part obliterated. *Rev.* blank. Hard, but somewhat damaged. $9\frac{1}{2}'' \times 1\frac{1}{4}''$.

N. xiii. iii. 001. Wooden mouse-trap. Cf. N. xxiv. viii. 0013, and *Anc. Khotan*, Pl. LXXIII, N. xix. 2. $14\frac{1}{4}'' \times 4'' \times \frac{3}{4}''$. Pl. XIX.

N. xiii. iii. 002. Wooden boot-last. Much sand-encrusted. Cf. N. xix. 001, 002. $9\frac{1}{2}'' \times 3'' \times 2\frac{3}{8}''$ to $1\frac{1}{4}''$.

N. xiii. iii. 003. Wooden weaver's comb. Cf. N. xxii. i. 001, and *Anc. Khotan*, Pl. LXXIII, N. xx. 05. $9\frac{1}{2}'' \times 4'' \times 1\frac{1}{2}''$.

N. xiii. v. 1. Wooden panel carved in relief. Plain tenon at each end. Above, separated by moulding with carved chevrons, two lotus flowers, four-petalled and four-sepalled, filling oblong spaces. Below, in centre, eight-rayed star, from which radiate, on one side six, on the other seven, contiguous bands of sq. nail-head orn. Back scored by knife cuts. Prob. part of cupboard. $15'' \times 7\frac{1}{4}'' \times \frac{7}{8}''$. Pl. XIX.

N. xiii. v. 001. Fr. of rim of wooden bowl. Worked very smooth inside and out. Thickness $\frac{3}{16}''$; original diam. $4\frac{7}{8}''$.

OBJECTS FOUND NEAR, OR IN REFUSE OF, N. XIV

N. xiv. 001. Shallow wooden bowl. Bottom a little convex inside and hollow below. Warped into oval shape. On base a circular groove within which is inscribed a Svastika with cross-lines on the ends. H. $1\frac{1}{4}''$–$2\frac{1}{16}''$; diam. $7\frac{3}{4}'' \times 8\frac{1}{2}''$; thickness $\frac{5}{16}''$.

N. xiv. 002. Wheat in husk.

N. xiv. 003. Grains of wheat.

N. xiv. 004. Conical head-gear like a Phrygian cap. Made of carefully gored yellow felt. Much destroyed in centre, but point and lower edge well preserved. Five segmental strips to upper part, *c.* 4″ wide at lower ends. Lower 5″ made of two horizontal strips only. H. *c.* 14″; lower diam. *c.* 8″.

N. xiv. 005. Strip of leather document, with Khar. characters. $2'' \times \frac{1}{2}''$.

N. xiv. 006. Fr. of small pottery vessel, 'amphora' shape (found W. of N. xiv). Small mouth with sharp off-set lip. Round shoulder, two incised lines. Flat horizontal handle on shoulder. Wheel-made. Hard baked, grey clay. Brown, slightly lustrous glaze outside. Of same nature as modern brown stone-ware; glaze prob. an accidental smear formed in firing and not a salt glaze. Chinese. H. belly to mouth $2\frac{1}{4}''$; diam. of mouth *c.* $1\frac{3}{8}''$; diam. of belly *c.* 3″. Pl. XXXVI.

N. xiv. 007. Fr. of hand-made pottery in purple-brown clay, with many white granulations. Pattern on exterior of lines incised diagonally, bounded by incised line. $2\frac{3}{8}'' \times 2''$; thickness $\frac{1}{4}''$. Pl. XXXVI.

N. xiv. 008. Bronze arrowhead. Three flanges cut back to form barbs. Socketed to take shaft. Triangular depression between flanges, perhaps to secure shaft. Point corroded. Length along shaft line $1\frac{1}{8}''$; do. barb edges $1\frac{3}{8}''$; barb point to barb point $\frac{9}{16}''$. Pl. XXIX.

N. xiv. 009. Bronze disc, with oblong hole near edge, through which passes flat strip bent over and riveted. Apparently riveted to leather; possibly part of fringe of cuirass, in which case the disc would dangle free. $1\frac{1}{4}'' \times \frac{1}{32}''$; strip $1\frac{3}{4}''$ long; $\frac{1}{4}''$–$\frac{3}{8}''$ wide; $\frac{1}{16}''$ thick. Pl. XXIX.

N. xiv. 0010. Rectang. bronze plate, very thin. Two holes by one edge ($\frac{1}{16}''$ diam.). Perhaps piece of scale armour. $1\frac{7}{16}'' \times \frac{11}{16}''$.

N. xiv. 0011. Bronze plate, like N. xiv. 0010. $1\frac{7}{16}'' \times \frac{13}{16}''$.

OBJECTS EXCAVATED IN N. XIV. III

N. xiv. iii. 001. Three frs. of silk, pale green, faded pink, and dark blue. All somewhat discoloured by dirt, but the green otherwise in good condition. Green $7\frac{1}{2}'' \times 1\frac{1}{4}''$; pink $2\frac{1}{4}'' \times 1\frac{3}{8}''$; blue $4\frac{1}{2}'' \times 1\frac{1}{8}''$.

N. xiv. iii. 002. Strip of goat's hide with hair still covering one end and adhering also in few scattered patches. Stitch-marks along upper edge for attachment of another strip, part of which remains. In middle of big strip two holes cut, one $\frac{5}{8}''$ above the other, and semicircular piece (diam. $\frac{5}{8}''$) taken out of edge above. $9\frac{1}{2}'' \times 3\frac{5}{8}''$.

N. xiv. iii. 003. Fr. of buff felt, ragged, very soft. *C.* $10'' \times 3\frac{1}{2}''$.

N. xiv. iii. 004. Three frs. of woollen material, thick, firm (as L.A. iv. 003 and L.A. vi. ii. 0027); yellow ground inwoven with dark brown in parts. From remains on two frs. (which perhaps join) pattern seems to consist of parallel stripes of dark brown at least 5″ apart, united by cross-lines $\frac{3}{8}''$ wide of the same colour, alternating regularly with equal lines of yellow ground. Third fr. not large enough to give idea of pattern. Longest fr. 10″ × *c.* 7″. Also piece of goat's-hair rope 2′ 5″ long.

N. xiv. iii. 005. Piece of woollen string, brown and white, three ply, each consisting of strands of two threads. Length $14\frac{7}{8}''$; thickness about $\frac{1}{8}''$.

N. xiv. iii. 006. a. Hank of thick yellow silk thread. Threads are doubled, and near doubled end a light thread is sewn through hank to separate the up thread from the down. Tag of whitish and of red felt is attached to this dividing thread. (Thread analysed by Dr. Hanausek.) Length of hank 2′ 8″.

N. xiv. iii. 006. b. Frs. of canvas-like woollen fabrics in yellow, buff, and pink. (Determined by Dr. Hanausek.) Gr. M. 17″.

N. xiv. iii. 006. c. Fr. of wool felt of loose texture. Natural buff colour, on which is sewn kind of wave scroll pattern in thin crimson felt. $4'' \times 6\frac{1}{2}''$.

N. xiv. iii. 006. d. Fr. of pile carpet. Construction as in L. A. vi. ii. 0046, but without back tufts; is more loosely made and warp a looser yarn. Weft is only of two strands, so that pile wool is not so completely embedded and is visible at back. There are two rows of weaving to each row of pile. Pile is about $\frac{1}{4}''$ long, 5 to inch vertically, and 10 transversely. Pattern nearly all missing. Colours present, brilliant crimson, bright blue, dark blue, deep brown, saffron and white, much worn. Gr. M. $12'' \times 6\frac{1}{2}''$.

N. xiv. iii. 006. e. Two frs. of plaited woollen braid, light red, $1\frac{5}{8}''$ wide; another of stronger red of same texture but closer and less elastic, edges not remaining, but prob. a wider braid; strip of crimson wool fabric much frayed out; and frs. of usual red fabric and light buff felt. Gr. M. $13\frac{1}{2}''$.

N. xiv. iii. 006. f. Miscellaneous frs. of fabrics, including small rags of dark blue felt; fr. of dark grey fabric, usual texture; strip of green silk; fr. of buff silk

tied up with fine cord and containing sand (?); scrap of soft yellow silk, unravelled; strip of blue silk twisted into cord ($2\frac{1}{2}''$ long); thread of red silk 'twist' (18" long); piece of brown and white hair string, three ply (9" long); ball of light buff string (two ply); and claw of eagle or other large bird.

N. xiv. iii. 007. a. Miscellaneous rags of red, buff, and yellow, probably woollen fabrics, and brown and light buff felt. Very decayed and dirty.

N. xiv. iii. 007. b. Fr. of tanned leather of irregular shape, tied up with goat's-hair string, and containing minute broken pieces of bark and stick.

N. xiv. iii. 007. c. Frs. of braid. Cf. N. xiv. iii. 006. e. Deep red. Gr. M. $14'' \times 2''$.

N. xiv. iii. 007. d. Fr. of flat goat's-hair string band. Cf. L.B. iii. 004 and N. xxix. 001. Plaited, of five strands, two dark brown and three yellow. Plaiting frayed out except for about 2". $11\frac{1}{2}'' \times c.\ \frac{3}{4}''$.

N. xiv. iii. 007. e. Two frs. of tanned leather, oblong shape, one with stitch-marks round the edges and rather thicker than the other. Resemble shoulder-pieces from a coat. Thick piece, Gr. M. $4\frac{3}{4}'' \times 3''$; thin piece, Gr. M. $6\frac{1}{2}'' \times 2\frac{1}{2}''$.

N. xiv. iii. 007. f. Two strips of felt, light buff and dark blue. The blue is laid on top of the buff, and for space of 2" sewed closely down upon it with red thread. On blue side, stitches give effect of scattered red seed; on buff, of irregular cross-work. 2" from end a narrow band of green silk is sewed across the blue strip, and beyond this the two strips of felt are free. Part of a fringe (?). Buff felt $6\frac{1}{4}'' \times \frac{3}{4}''$; blue $5\frac{1}{4}'' \times \frac{3}{4}''$.

N. xiv. iii. 007. g. Strip of deer-skin (?), formed of three pieces, $3\frac{1}{4}''$ to $3\frac{1}{2}''$ long, joined lengthways. Fur still remains for most part. Down one edge remains of fringe (?). This apparently consisted of strips of blue, red, and yellow felt overheaded to edge with red thread, lying inwards over the hide in small points whence hung tassels suspended on long threads; one survives, heart-shaped, blue and red, with secondary small tassel dependent from it. On lower edge stitch-holes. Tanned and soft. $10\frac{1}{8}'' \times 1\frac{3}{4}''$.

N. xiv. iii. 007. h. Strip of tanned leather, tapering towards one end (broken off). At the other (also broken) a rectangular piece has been cut out. $\frac{5}{16}''$ from this a line of stitching crosses the strip, and from it, at right angles, run four lines of stitching towards the tapering end, nearing each other as they approach it. On the reverse side frs. of tufts of red thread remain in the stitches. The edges of the strip are carefully finished off. Tongue of a belt (?). Cf. N. xxiii. 001. $3\frac{1}{2}'' \times 1\frac{1}{2}''$; thickness $\frac{3}{32}''$.

N. xiv. iii. 007. j. Piece of black shale, one edge cut, the others broken. Under-surface, flat; upper, slightly convex and scratched. Hole of *c.* $\frac{3}{16}''$ diam. bored in corner. $2\frac{1}{2}'' \times 1\frac{1}{8}''$; thickness $\frac{3}{16}''$.

N. xiv. iii. 007. k. Handle of twisted leather thong, with flat ends showing stitch-marks and remains of gut stitches. Round middle of handle is knotted a doubled string, ends free. Length of handle $4\frac{3}{4}''$; diam. $\frac{1}{8}''$.

N. xiv. iii. 007. l. Woollen fr. similar to N. xiv. iii. 004, to which it prob. belongs. *C.* $6\frac{1}{2}'' \times 7''$.

N. xiv. iii. 008. Wooden spatula or modelling tool (?). Handle round, blade flat with blunt wedge-shaped point. $7\frac{1}{2}'' \times \frac{1}{4}''$ (round end); $\frac{9}{16}'' \times \frac{3}{16}''$ at flat end.

N. xiv. iii. 009. Wooden modelling tool (?), like N. xiv. iii. 008. Round handle and long blade with wedge-shaped point. $7'' \times \frac{1}{4}''$ handle. Blade 4" long, $\frac{11}{16}''$ to $\frac{1}{2}'' \times \frac{1}{4}''$ to $\frac{1}{16}''$.

N. xiv. iii. 0010. Wooden seal-case (?) unattached, like T. xii. 002. Groove $\frac{5}{8}'' \times \frac{1}{4}''$. Ends not sq., but rudely bevelled. $1\frac{3}{8}'' \times \frac{3}{4}'' \times \frac{5}{8}''$. Pl. XXVIII.

N. xiv. iii. 0011. Wooden stick, so cut (not turned) as to be a series of balls between double cones (in longitudinal section circles between lozenges). Begins with a cone base, and ends (broken off) with ball. $5\frac{1}{4}'' \times \frac{7}{16}''$ to $\frac{1}{4}''$. Pl. XXVIII.

N. xiv. iii. 0012. Wooden stick, like N. xiv. iii. 0011. Broken both ends (ball and cone-point). $4\frac{3}{4}'' \times \frac{1}{2}'' \times \frac{1}{4}''$.

N. xiv. iii. 0013. Wooden stick, like N. xiv. iii. 0011. Complete; begins with cone-base and ends with cone-point (blunted). $5\frac{3}{16}'' \times \frac{7}{16}'' \times \frac{1}{4}''$. Pl. XXVIII.

N. xiv. iii. 0014. Short wooden stick. Bark left on to middle; then the stick is gradually pared down to about $\frac{7}{16}''$ from end, where it swells to original diam., making flat-ended knob. Prob. small stamp or pestle. $4\frac{1}{4}'' \times \frac{7}{16}''$ to $\frac{1}{4}''$.

N. xiv. iii. 0015. Roughly flattened wooden spatula. Cf. N. xiv. iii. 008–9. $8\frac{7}{8}'' \times \frac{9}{16}''$ to $\frac{5}{16}'' \times \frac{1}{4}''$ to $\frac{1}{16}''$.

N. xiv. iii. 0016. Rounded wooden stick, one end expanded to pointed knob. Knob $1\frac{1}{8}'' \times \frac{1}{2}''$; stick $6\frac{1}{8}'' \times \frac{1}{4}''$. Pl. XXVIII.

N. xiv. iii. 0017. Wooden seal-case (?), like T. xii. 002. Central mortise $\frac{5}{8}'' \times \frac{3}{16}''$. Ends vigorously bevelled. Sides rounded, flat base. $2\frac{3}{8}'' \times \frac{9}{16}'' \times \frac{1}{2}''$. Pl. XXVIII.

N. xiv. iii. 0018. Wooden comb, round-topped and fine-toothed. Cf. N. xxvii. 001, &c. H. $2\frac{3}{8}''$; length of teeth $\frac{7}{8}''$; width $2\frac{3}{8}''$; thickness $\frac{3}{16}''$; thirty-five teeth to 1". Pl. XXVIII.

N. xiv. iii. 0019. Wooden comb, square-topped, with long coarse teeth. H. $3\frac{1}{8}''$; length of teeth $2\frac{1}{4}''$; width $2\frac{3}{8}''$; thickness $\frac{1}{4}''$; seven teeth to 1". Pl. XXVIII.

N. xiv. iii. 0020. Straight wooden stick, with bark rudely trimmed off. Chop-stick (?). $8\frac{3}{4}'' \times \frac{3}{8}''$ to $\frac{1}{4}''$.

N. xiv. iii. 0021. Straight lacquer stick. Lacquered red over black, but red is mostly worn off. Ends lacquered. Chop-stick. $8\frac{5}{8}'' \times \frac{1}{5}''$.

N. xiv. iii. 0022. Flat piece of wood. Oblong, with a tag projecting at one end. Hole in tag and hole at the

other end. Label (?). $7\frac{1}{4}''$ (with tag, $8\frac{1}{4}''$) × $2\frac{1}{4}''$ × $\frac{7}{16}''$ to $\frac{3}{16}''$.

N. xiv. iii. 0023. Thin strip of wood, lacquered, brown one side and red the other. Fairly preserved. $4\frac{7}{16}''$ × $\frac{13}{16}''$ × $\frac{1}{16}''$.

N. xiv. iii. 0024. Wooden anchor-like object with straight slender shaft let into bowed cross-piece. Cf. L.B. iv. ii. 009. Shaft broken. Cross-piece $2\frac{3}{16}''$ × $\frac{5}{16}''$ × $\frac{1}{4}''$; shaft $2\frac{1}{8}''$ × $\frac{1}{8}''$. Pl. XXVIII.

N. xiv. iii. 0025. Strip of lacquered wood. One corner rounded off to a right-angled return. Inner edge lacquered red. Rest lacquered brown. On one side a pattern. Two thin parallel red lines $\frac{1}{4}''$ apart, crossed at intervals of $1\frac{1}{2}''$ by four thin red lines. In spaces between, four oval dashes arranged in a lozenge. These alternately red and yellow-green. Part of a frame. $4\frac{7}{8}''$ × $\frac{5}{8}''$ × $\frac{3}{16}''$.

N. xiv. iii. 0026. Grass broom. Made flat, each stalk crushed and twisted in, and carried along the edge, thus making a stout plaited border. Finally, broom was rolled up. Cf. *Anc. Khotan*, Pl. LXXIII, N. x. 07. Length 11″; handle, $4\frac{1}{2}''$ × 2″ diam.

N. xiv. iii. 0027. Taṛigh (millet) grains.

N. xiv. iii. 0028. Fabrics. Two pieces brown felt; one piece buff silk; one piece fine matting. Gr. M. $6\frac{1}{2}''$.

N. xiv. iii. 0029. Wheat grains.

N. xiv. iii. 0030. Wheat grains.

N. xiv. iii. 0031. Bronze strip, oblong in section. $1\frac{7}{8}''$ × $\frac{1}{8}''$ × $\frac{1}{16}''$.

N. xiv. iii. 0032. Iron arrowhead, three-flanged, with solid haft; like N. of C. 123. 001. Much corroded. Length $1\frac{3}{4}''$. Pl. XXIX.

N. xiv. iii. 0033. Disc of leather with sq. central hole (like Chinese coin). On one side wool sewn in round edge, three bands of red alternating with bands of blue and yellow stripes. Prob. edging of a button which had a metal centre and shank. 1″ × $\frac{1}{4}''$. Pl. XXIX.

N. xiv. iii. 0034. Horn seal. Roughly cubical with projecting pierced handle. Rectilinear design on side opposite handle, and on one other side. Apparently unfinished. $\frac{13}{16}''$ × $\frac{5}{8}''$ × $\frac{1}{2}''$; handle $\frac{1}{2}''$ × $\frac{1}{4}''$. Pl. XXIX.

N. xiv. iii. 0035. Circular orn. of dark paste inlay. Flat on back, and pierced with a hole. Front, from which outer shell is peeling, orn. with six yellow radial stripes, divided by two thin red radial lines. Between stripes, on dark ground, yellow circles surrounding black discs on which six-rayed yellow stars with red centres. Pendant or button. Fine work. 1″ × $\frac{3}{8}''$. Pl. XXIX.

N. xiv. iii. 0036. Turned wooden chair leg. At base, broad foot with narrow collar; cylindrical member $3\frac{1}{2}''$ high, second umbrella-like band and collar; elongated pear-shaped member $4\frac{1}{2}''$ high; five umbrella-like bands; cylindrical member 2″ long to tenon. $16\frac{3}{4}''$ (with tenon, $18\frac{3}{4}''$) × $2\frac{1}{2}''$ to $1\frac{3}{8}''$.

N. xiv. iii. 0037. Wooden chair leg. Fellow to N. xiv. iii. 0036. Pl. XIX.

OBJECTS EXCAVATED IN RUINS N. XV–XXI

N. xv. i. 2. Oblong label-like tablet, pierced at one end; lower edge has slanting sawn notch near pierced end. *Obv.* three ll. Khar., clear. *Rev.* blank. Hard and well preserved. 6″ × $2\frac{1}{8}''$.

N. xv. i. 2. a–b. Two ends of a flat wooden strip like N. xxiv. viii. 004. One side of each shows traces of writing. a. $10\frac{3}{4}''$; b. 6″ × $\frac{7}{8}''$ × $\frac{1}{8}''$.

N. xv. i. 3. Label-like tablet. One end roughly rounded, other pointed and pierced. *Obv.* thirteen ll. Khar. written across width of tablet. *Rev.* four ll. Khar. written as on Obv. Hard and well preserved. 8″ × $1\frac{3}{16}''$.

N. xv. i. 4. Rectang. under-tablet. *Obv.* seven ll. Khar., black and clear. *Rev.* one very short l. at lower edge; above in corner is single character. Excellent condition. $9\frac{3}{8}''$ × $2\frac{7}{8}''$.

N. xv. i. 5. Wedge under-tablet. *Obv.* three ll. Khar., clear and black. *Rev.* blank. Hard and well preserved. $7\frac{3}{8}''$ × $1\frac{15}{16}''$.

N. xvi. i. 1. Oblong tablet. *Obv.* faint traces of three ll. Khar. *Rev.* blank. Fairly hard but surface bleached. $5\frac{1}{8}''$ × $2\frac{1}{4}''$.

N. xvi. i. 001. Stick of wood, swelling gradually to slight shoulder from which it tapers to (broken) end. Weaving-stick (?). $8\frac{1}{8}''$ × $\frac{7}{16}''$ to $\frac{1}{4}''$.

N. xvi. i. 002. Round stick of wood. At one end warped and bent to right angle. Short cross-piece so cut as to leave projecting knob at end. Long arm 8″ × $\frac{1}{2}''$; short arm $2\frac{1}{2}''$ × $\frac{1}{2}''$ to $\frac{5}{16}''$. Standard length for soles of shoes apparently between 7″ and 8″. A fixed shoemaker's measure? Pl. XXVIII.

N. xvi. i. 003. Stick of wood with double notch at one end. Cf. N. xxiii. ii. 004. $8\frac{1}{4}''$ × $\frac{5}{16}''$ to $\frac{3}{16}''$.

N. xvii. i. 001. Wedge under-tablet. Point slightly broken. *Obv.* five short ll. Khar., black and clear, at sq. end. *Rev.* blank. Hard and well preserved. $9\frac{3}{4}''$ × $1\frac{7}{8}''$.

N. xviii. 001. Large flat wooden stamp. Roughly heart-shaped with a nick at each end. Hole at broad end, slanting, prob. for handle. On face, very rude design of a cow. Cf. N. xxiii. 002. $5\frac{1}{2}''$ × 4″ × $\frac{7}{8}''$. Pl. XIX.

N. xviii. i. 1. Rectang. cov.-tablet, with seal cavity ($1\frac{1}{2}''$ × $1\frac{1}{4}''$) empty. *Obv.* one l. Khar. at one end. *Rev.* four ll. Khar., black and clear, partly destroyed. Soft and in parts burnt; edges split. $5\frac{3}{4}''$ × $2\frac{1}{2}''$.

N. xix. 001. Wooden shoe-last. Not right or left foot.

Cf. *Anc. Khotan*, ii. Pl. LXXIII, N. xx. 04. $8\frac{1}{8}'' \times 2\frac{1}{2}''$ to $1\frac{5}{8}'' \times 1\frac{3}{8}''$ to $\frac{5}{8}''$.

N. xix. 002. Wooden shoe-last. Sides quite straight. Shows leg as far as ankle. Cf. *Anc. Khotan*, ii. Pl. LXXIII, N. xx. 04. $6\frac{7}{8}'' \times 2\frac{1}{8}'' \times 2\frac{1}{2}''$ to $\frac{5}{8}''$. Pl. XIX.

N. xix. 003. Forked stick with groove at each end and string tied across. At apex, on one side two crossed lines cut, on the other, sign ठ. Possibly handle of thong of fire-drill, cf. N. xxix. ii. 001. b, or a 'dead-eye'. H. of bow $2\frac{7}{8}''$; diam. *c.* $\frac{5}{8}''$; across ends $2\frac{3}{4}''$. Pl. XXVIII.

N. xix. i. 1. Wedge under-tablet, tapering very slightly to pierced end. *Obv.* three (?) ll. Khar., faint and obscured. *Rev.* three ll. Khar., much obscured. Soft, cracked, and discoloured; point broken. $6\frac{1}{8}'' \times \frac{7}{8}''$.

N. xix. iii. 1. Label-shaped tablet with rounded ends pierced at one end. Blank. Surface perished. $3\frac{7}{8}'' \times 1\frac{9}{16}''$.

N. xix. iii. 2. Oblong tablet, roughly rectang., with hole at one end. *Obv.* two columns Khar. (five and three ll.), faint. *Rev.* one l. Khar., faint. $4\frac{3}{4}'' \times 2\frac{1}{8}''$.

N. xix. iii. 3. Small tablet, with wedge-shaped ends, pierced near one end. *Obv.* (damaged) one l. Khar., very faint. *Rev.* six ll. Khar., faint in parts, written across width. Condition poor. $2\frac{7}{8}'' \times \frac{7}{8}''$.

N. xix. iii. 4. Lacquered wooden bowl, part of bottom, cf. T. vi. b. ii. 001. In centre of base, raised circle. Outside black with red band; inside red over black, with small black floral wreath design. $7\frac{1}{2}'' \times 1\frac{1}{8}'' \times \frac{1}{4}''$.

N. xix. iii. 001. Wooden slip, pierced with two holes, $\frac{1}{8}''$ diam. Blank. Hard and well preserved. $4\frac{5}{8}'' \times \frac{13}{16}'' \times \frac{3}{16}''$.

N. xx. 001. Half of sq. lignite seal, split along hole. On complete side incised spiral with serrated outer edge. $\frac{11}{16}''$ sq. $\times \frac{3}{16}''$. Pl. XXIX.

N. xx. iv. 1. Slip-shaped tablet roughly trimmed, pierced at one end. *Obv.* (convex) two ll. Khar. *Rev.* two short ll. Khar. Writing faint. Well preserved. $7\frac{1}{2}'' \times \frac{7}{8}''$.

N. xxi. 1. Oblong tablet with hole at rounded end. *Obv.* blank. *Rev.* three columns Khar. (4, 4, 2 ll.), very faint. Good condition. $6\frac{3}{4}'' \times 1\frac{5}{8}'' \times \frac{5}{16}''$.

N. xxi. 2. Bottom of lacquered wooden bowl, cf. T. vi. b. ii. 001. Outside black, inside red on black. Broken in antiquity, and showing marks of four rivets, two in bronze and two in iron. These were small oblong plates on each side of bowl, pinned together at each end; cf. N. xii. 0013. Base circular with raised ring. Diam. $3\frac{1}{2}''$; thickness $\frac{1}{8}''$ to $\frac{1}{4}''$.

N. xxi. 001. Fr. of large hand-made vessel, neck and shoulder with handle, of dark grey gritty ware. Handle which has subsidiary loop at lower junction, is orn. with double row of stamped circles on outside and with single row on sides. Last is continued from upper junction round neck; shoulder is orn. by two vertical rows of circles on each side of handle and by incised triangles one inside another. $7\frac{1}{2}'' \times 5\frac{1}{2}''$. Pl. XXXVI.

OBJECTS EXCAVATED IN RUIN N. XXII

N. xxii. 001. Straight wooden stick with bark on, till $\frac{7}{8}''$ from narrow end, where it is thinned down. Thick end rounded. Possibly fire-drill (but unused). $18\frac{3}{4}'' \times \frac{7}{16}''$ to $\frac{1}{4}''$.

N. xxii. 002. Frs. of coarse fabrics. Largest piece buff, canvas-like in look, with remains of band at top, into which it has been gathered; sand-encrusted. Also small frs. of finer buff muslin-like fabrics with scraps of salmon fabric of open texture. Largest piece $1' \, 1\frac{1}{2}'' \times 1' \, 4\frac{1}{4}''$.

N. xxii. 003. Fr. of wooden tail-piece of stringed instrument, for five strings. $2\frac{1}{16}'' \times 1\frac{3}{8}'' \times \frac{3}{8}''$.

N. xxii. i. 1. Oblong tablet. Two holes, one containing string. *Obv.* four ll. Khar., lengthways. *Rev.* one l. Khar. $4'' \times 2\frac{1}{8}'' \times \frac{1}{4}''$.

N. xxii. i. 2. a. Wedge under-tablet, point broken. *Obv.* three ll. Khar., faint and largely obliterated. *Rev.* (rounded) blank. Bad condition. $7'' \times 1\frac{1}{4}''$.

N. xxii. i. 2. b. Lathe-like tablet, pointed at either end, tapering to L. end pierced. *Obv.* rounded, four columns of three short ll. Khar. followed by single long line; writing clear. *Rev.* single line Khar. Perfectly preserved. $11\frac{1}{8}'' \times 1\frac{3}{8}''$. Pl. XXVI.

N. xxii. i. 3. Lathe-like tablet, roughly rounded ends. Hole at one end. *Obv.* blank. *Rev.* three columns of three short ll. Khar., followed by one longer line. Much encrusted. Surface soft, otherwise sound. $9\frac{3}{4}'' \times 1\frac{5}{16}''$.

N. xxii. i. 4. Fr. of tablet, with roughly rounded end. *Obv.* three ll. Khar., black but encrusted. *Rev.* one l. Khar. Soft, and split. $2\frac{1}{2}'' \times 1\frac{5}{16}''$.

N. xxii. i. 5. Oblong tablet, one end rounded, one lost. *Obv.* faint traces of four (?) ll. Khar. *Rev.* blank. Surface weathered. $9\frac{3}{4}'' \times 1\frac{1}{8}''$.

N. xxii. i. 6. Oblong tablet roughly trimmed, with pointed ends, pierced at one end. *Obv.* three columns Khar. (3, 3, 1 ll. respectively). *Rev.* one l. Khar. Writing faded, but distinct. Well preserved. $7\frac{1}{2}'' \times 1\frac{1}{4}''$.

N. xxii. i. 7. Oblong tablet, pierced at one of rounded ends. *Obv.* three ll. Khar., very faint. *Rev.* in corner, two ll. Khar. obscured by refuse adhering. Good condition. $8'' \times 1\frac{3}{4}''$.

N. xxii. i. 001. Heavy wooden comb, for pressing down threads in weaving. Projecting handle. Surface polished by use. Cf. L.B. iv. vii. 002. Cf. *Anc. Khotan*, ii. Pl. LXXIII, N. xx. 05. H. $6\frac{1}{2}''$ (with handle, $9''$);

length of teeth $\frac{5}{16}''$; width 4″; thickness $1\frac{3}{4}''$; four teeth to 1″. Pl. XXVIII.

N. XXII. i. 002. Wooden doll. Face broken away. Head, raised arms, and body to hips cut out of one flat piece of wood; legs were made separately and hinged in sockets. Dressed in light brown silk with red silk sash. To train of skirt are sewn a patch of buff and a patch of purple silk. H. $3\frac{1}{2}''$.

N. XXII. ii. 1. Oblong tablet. Hole with string in corner. *Obv.* blank. *Rev.* three columns Khar. of 5, 6, and 4 ll. Good condition. $7\frac{1}{2}'' \times 1\frac{7}{8}'' \times \frac{1}{4}''$. Pl. XXVI.

N. XXII. ii. 2. Oblong tablet, one end rounded. Blank. $5\frac{1}{4}'' \times 1\frac{3}{4}''$.

N. XXII. iii. 1. a–b. Double-wedge tablet. Opened. Cov.-tablet: *Obv.* $1\frac{1}{4}''$ from sq. end seal cav.; one l. Khar. each side of cav. and usual character by hole. Part near hole split away. *Rev.* four ll. Khar.

Under-tablet: *Obv.* four ll. Khar. *Rev.* traces of writing by sq. end. Hard and well preserved. $8\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{7}{8}''$ to $\frac{1}{2}''$.

N. XXII. iii. 2. Wedge cov.-tablet, with empty seal cav. $1'' \times 1\frac{3}{8}''$. *Obv.* to R. of seal cav. one l. Khar., much encrusted. *Rev.* one l. Khar., clear. Hard and well preserved but encrusted. $9\frac{3}{4}'' \times 1\frac{11}{16}''$.

N. XXII. iii. 3. Wedge under-tablet; end slightly broken. *Obv.* three ll. Khar., mostly clear. *Rev.* one l. Khar. (faint) in corner. Fairly hard and well preserved. $7\frac{5}{8}'' \times 1\frac{9}{16}''$.

N. XXII. iii. 4. Wedge cov.-tablet. *Obv.* $1\frac{1}{4}''$ from sq. end, seal cav. $(1\frac{5}{16}'' \times 1\frac{1}{8}'')$ with remains of seal. By sq. end one l. Khar. faint. *Rev.* four ll. Khar. Split, but in good condition. $8\frac{1}{2}'' \times 1\frac{7}{8}''$.

N. XXII. iii. 5. Oblong tablet, with wedge point. *Obv.* five short ll. Khar., faint. *Rev.* blank. Hard and well preserved. $3\frac{11}{16}'' \times 1\frac{11}{16}'' \times \frac{3}{8}''$.

N. XXII. iii. 6. Wedge under-tablet. *Obv.* three ll. Khar., faded but clear. *Rev.* blank. Well preserved. $9'' \times 1\frac{5}{8}''$.

N. XXII. iii. 7. Wedge cov.-tablet. *Obv.* seal cav. $(1\frac{3}{8}'' \times 1'')$ $1\frac{1}{4}''$ from sq. end. Traces of Khar. by sq. end and at point. *Rev.* two ll. Khar., faint. Wood soft. Point broken. $8\frac{1}{4}'' \times 1\frac{3}{4}'' \times \frac{5}{8}''$ to $\frac{1}{8}''$.

N. XXII. iii. 8. Wedge cov.-tablet. *Obv.* seal cav. $(1\frac{1}{2}'' \times 1\frac{5}{16}'')$ $1\frac{1}{4}''$ from sq. end with remains of seal and string. One l. Khar. by sq. end. Usual character by hole. *Rev.* blank. $9\frac{1}{2}'' \times 2'' \times \frac{3}{4}''$ to $\frac{3}{16}''$.

N. XXII. iii. 9. Rectang. cov.-tablet. Seal cavity $(1\frac{7}{16}'' \times 1\frac{1}{2}'')$ empty. *Obv.* three ll. Khar. above cav. *Rev.* six ll. Khar., black and clear. Soft but well preserved. $4\frac{1}{2}'' \times 1\frac{7}{8}''$. Pl. XXIII.

N. XXII. iii. 10. a, b. Two wedge-shaped labels, or under-tablets, with holes at points and notches for string $\frac{1}{2}''$ from sq. end. If a pair of tablets, no sign of seal-case. (a) *Obv.* six ll. Khar., clear. *Rev.* blank. (b) *Obv.* two ll. Khar. clear. *Rev.* blank. Good condition. $5'' \times 2\frac{1}{2}''$.

N. XXII. iii. 11. Wedge under-tablet. *Obv.* four ll. Khar., for most part clear. *Rev.* blank. Well preserved. $9\frac{1}{4}'' \times 2''$.

N. XXII. iii. 12. Oblong tablet. Hole near one end. *Obv.* three ll. Khar., very faint. *Rev.* four ll. Khar., very faint. Wood hard. $5\frac{1}{8}'' \times 1\frac{3}{8}'' \times \frac{1}{4}''$.

N. XXII. iii. 13. Large oblong tablet, tapering slightly, cut into point and pierced. *Obv.* one long and two short ll. Khar., black and clear, some incrustation. *Rev.* blank. Hard and well preserved, corner damaged. $23'' \times 3\frac{1}{2}''$. Pl. XXV.

N. XXII. iii. 14. Rectang. cov.-tablet, with seal cav. $(1\frac{1}{2}'' \times 1\frac{1}{2}'')$ empty. *Obv.* faint traces of writing on each side of cav. *Rev.* blank. Hard and well preserved, but lower edge gnawed. $3\frac{5}{8}'' \times 2\frac{1}{4}''$.

N. XXII. iii. 15. Oblong tablet, with rounded ends, tapering towards pierced end. Both *Obv.* and *Rev.* orig. painted black (?). No writing. Fairly hard and well preserved. $10\frac{3}{8}'' \times 1\frac{3}{8}''$.

N. XXII. iii. 16. Wedge cov.-tablet. *Obv.* $1\frac{5}{8}''$ from sq. end seal cav. $(1\frac{5}{8}'' \times 1'')$. Seal intact, design as on N. XXII. iii. 18, but very bad impression. One l. Khar. by sq. end, faint. *Rev.* two ll. Khar., faint. $9'' \times 1\frac{5}{8}'' \times \frac{5}{8}''$ to $\frac{1}{8}''$.

N. XXII. iii. 17. Wedge cov.-tablet. *Obv.* seal cav. $(1\frac{5}{16}'' \times 1\frac{1}{8}'')$ $1\frac{1}{8}''$ from sq. end. Traces of Khar. point side of seal. *Rev.* much encrusted with sand. Traces of Khar. $9\frac{1}{2}'' \times 2\frac{1}{8}'' \times \frac{5}{8}''$ to $\frac{1}{16}''$.

N. XXII. iii. 18. Double-wedge tablet, complete. String cut. Cov.-tablet: *Obv.* seal cav. $(1\frac{1}{2}'' \times 1\frac{3}{8}'')$ $1\frac{1}{16}''$ from sq. end, bearing impression of upright fig. of archaic Athene type (cf. N. XXIV. viii. 6, and *Anc. Khotan*, ii. Pl. LXXI, N. XV. 24). Marks of setting not clear. By sq. end, one l. Khar., very faint. *Rev.* three ll. Khar., clear.

Under-tablet: *Obv.* three ll. Khar., faint. *Rev.* blank. $8\frac{1}{2}'' \times 1\frac{7}{8}'' \times \frac{3}{4}''$ to $\frac{5}{16}''$.

N. XXII. iii. 19. a, b. Double-wedge tablet, complete. Cov.-tablet: *Obv.* 1″ from sq. end seal cav. $(1\frac{1}{2}'' \times 1\frac{3}{16}'')$ with remains of seal. One l. Khar. by sq. end, one l. Khar. point side of seal, and usual character by hole. *Rev.* three ll. Khar., clear.

Under-tablet: *Obv.* three ll. Khar. *Rev.* one l. Khar. by sq. end. Condition good. $7'' \times 1\frac{1}{2}'' \times \frac{3}{4}''$ to $\frac{1}{4}''$.

N. XXII. iii. 20. Wedge under-tablet. *Obv.* three ll. Khar., faint. *Rev.* blank. Split, but good condition. $8\frac{1}{2}'' \times 1\frac{3}{4}''$.

N. XXII. iii. 21. a, b. Double-wedge tablet, complete. Cov.-tablet: *Obv.* $1\frac{1}{8}''$ from sq. end seal cav. $(1'' \times 1\frac{3}{8}'')$ empty. No writing visible. *Rev.* two and a half ll. Khar. clear.

Under-tablet: *Obv.* four ll. Khar., clear. *Rev.* blank. Good condition. $8\frac{3}{4}'' \times 1\frac{3}{4}'' \times 1''$ to $\frac{3}{4}''$.

N. xxii. iii. 22. Fr. of oblong tablet, only wedge end preserved. *Obv.* two ll. Khar., very faint. *Rev.* blank. Fr. soft, but well preserved. $4\frac{3}{8}'' \times 1\frac{1}{16}''$.

N. xxii. iii. 23. a, b. Double-wedge tablet, opened. Cov.-tablet has broken point. *Obv.* 2" from sq. end seal cav. ($1\frac{1}{2} \times 1\frac{3}{8}''$) with remains of seal. One l. Khar. at sq. end. *Rev.* three ll. Khar.

Under-tablet: *Obv.* three ll. Khar. *Rev.* blank. Much sand-encrusted. $8\frac{3}{4}'' \times 2\frac{1}{8}'' \times \frac{3}{4}''$ to $\frac{3}{8}''$.

N. xxii. iii. 001. Wooden knife-handle. Pointed end. Hollow on each edge, near blade, making a waist. Higher up than this a small hole. Triangular socket for blade (thus one-edged) is $\frac{7}{8}''$ long $\times \frac{1}{4}''$ at base of triangle, and $1\frac{1}{4}''$ deep. $3\frac{3}{4}'' \times 1'' \times \frac{3}{8}''$.

N. xxii. iii. 002. Fr. of wedge(?) tablet. Traces of Khar. letters. $6'' \times 1'' \times \frac{1}{8}''$.

OBJECTS FOUND IN N. XXIII

N. xxiii. 001. Fr. of 'green' leather band, from armour (?), prob. lacquered. Surface orn. with small network of diagonal lines, impressed. Six rows of small holes, parallel to edges, are also pricked in for sewing, frs. of thread still remaining in them. $\frac{5}{16}''$ from edge a parallel cut has been made in one place $\frac{5}{16}''$ long. Cf. also N. xiv. iii. 007. h. $3\frac{5}{8}'' \times 1\frac{13}{16}'' \times \frac{1}{8}''$.

N. xxiii. 002. Wooden stamp, large, flat. Cf. N. xviii. 001. Oval but with nick out at each end. Angular incised drawing of cow and man. Small handle behind. $5\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{1}{2}''$. Pl. XIX.

N. xxiii. 003. Part of basket. Made of horizontal layers of straight withies (split). Round each of these layers withies are wound spirally, interlacing with the spiral withies binding the layers above and below. Seven such courses go to the $1\frac{1}{2}''$ h. preserved. Long diam. at top $7\frac{1}{2}''$. Crushed in sideways.

N. xxiii. i. 1. Rectang. cov.-tablet, with empty seal cav. $1\frac{1}{2}'' \times 1\frac{3}{4}''$. *Obv.* to R. of cav. faint traces of Khar. *Rev.* blank. Most of L. end broken off; hard and otherwise well preserved. $6'' \times 3'' \times \frac{1}{8}$ to $\frac{7}{8}''$.

N. xxiii. i. 2. Part of oblong tablet. No writing visible. Wood hard but much warped. $6\frac{7}{8}'' \times 2\frac{1}{4}'' \times \frac{5}{16}''$.

N. xxiii. i. 3. Rectang. under-tablet. No writing visible. Wood hard, but much cracked, and with destroyed surface. $8\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{1}{4}''$.

N. xxiii. i. 4. Lathe-like tablet of roughly trimmed wood, pierced at end. Blank. Warped and bleached, but otherwise in good condition. $10\frac{1}{2}'' \times 1\frac{1}{4}'' \times \frac{3}{16}$.

N. xxiii. i. 5. Oblong tablet, with hole at wedge-shaped end. *Obv.* one column (five ll.) Khar. by sq. end, faint. One l. Khar. by point, faint. *Rev.* blank. Good condition. $3\frac{3}{4}'' \times 1\frac{3}{4}'' \times \frac{3}{8}''$.

N. xxiii. i. 6, 7 (joined). Oblong tablet. Hole in corner. Edges split. Piece missing from side. *Obv.* two ll. Khar., very faint. *Rev.* blank. $8\frac{3}{4}'' \times 1\frac{7}{8}'' \times \frac{3}{8}''$ to $\frac{5}{16}''$.

N. xxiii. i. 8. Wedge cov.-tablet. *Obv.* one letter Khar. by point. *Rev.* blank. Cracked and soft. $6\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

N. xxiii. i. 9. Rectang. under-tablet, part of. *Obv.* two ll. Khar., faded. *Rev.* blank. Surface perished. $4\frac{5}{8}'' \times \frac{3}{4}'' \times \frac{1}{2}''$.

N. xxiii. i. 10. Oblong tablet with wedge-shaped ends. *Obv.* blank. *Rev.* traces, very faint, of Khar. writing. $6'' \times 1\frac{1}{4}'' \times \frac{5}{16}''$.

N. xxiii. i. 11. Rectang. cov.-tablet, with empty seal cav. ($1\frac{1}{4}'' \times 1\frac{1}{4}''$). *Obv.* to R. of cav. two ll. Khar., very faint. *Rev.* nine ll. Khar., faded, but distinct. Soft; fairly preserved, but L. end chipped. $7\frac{3}{8}'' \times 3\frac{3}{4}'' \times \frac{1}{8}$ to $\frac{11}{16}''$.

N. xxiii. i. 12. Rectang. cov.-tablet, part of. Broken across, empty seal cav. still containing string. *Obv.* one l. Khar. *Rev.* one l. Khar. $5\frac{1}{2}'' \times 2\frac{3}{8}'' \times \frac{7}{16}''$ to $\frac{7}{8}''$.

N. xxiii. i. 13. Wedge under-tablet. *Obv.* three ll. Khar. *Rev.* blank. Writing clear on L. half of tablet, on R. almost disappeared. R. half soft and decayed. $13'' \times 1\frac{7}{8}'' \times \frac{1}{2}''$ max.

N. xxiii. i. 14. Wedge cov.-tablet. *Obv.* $1\frac{5}{8}''$ from sq. end seal cav. ($1\frac{3}{8}'' \times 1\frac{1}{8}''$); one l. Khar. by sq. end and traces of usual character by point. Surface cracked and rotten. *Rev.* blank. $7\frac{1}{4}'' \times 2'' \times \frac{9}{16}''$ to $\frac{1}{8}''$.

N. xxiii. i. 15. Wedge under-tablet. *Obv.* three ll. Khar., very black and clear. Surface pared away, prob. to efface earlier inscription. *Rev.* faint trace of one l. Khar. in top R. corner. Soft but fairly preserved; L. end split. $8\frac{1}{2}'' \times 2'' \times \frac{1}{2}''$.

N. xxiii. i. 16. Double-wedge tablet, with seal cav. ($1\frac{3}{8}'' \times 1\frac{3}{4}''$) empty. Cov.-tablet: *Obv.* one l. Khar. to L. of cav. *Rev.* one l. Khar. in top R. corner.

Under-tablet: *Obv.* three ll. Khar. *Rev.* traces of Khar. characters. Writing clear but faded. Pink stains round seal cav. Fairly hard and well preserved. $14\frac{1}{8}'' \times 2\frac{9}{16}'' \times \frac{1}{2}''$ to $1\frac{1}{2}''$.

N. xxiii. i. 001. Part of lacquered wooden bowl (edge), like T. vi. b. ii. 001. Black on edge and outside. Red inside. Good condition. $1\frac{7}{8}'' \times 1\frac{5}{8}'' \times \frac{5}{16}''$ to $\frac{1}{8}''$.

N. xxiii. i. 002. Piece of heavily ribbed basket; cf. N. xxiii. 003. $9'' \times 2\frac{3}{4}'' \times \frac{1}{4}''$.

N. xxiii. ii. 1. Rectang. cov.-tablet. Under-surface split away. *Obv.* two ll. Khar. across one end, very faint; one l. Khar. across other end, very faint. Seal cav. $2\frac{1}{8}'' \times 1\frac{5}{8}''$. $6\frac{1}{4}'' \times 2\frac{7}{8}'' \times \frac{7}{8}''$ to $\frac{1}{8}''$.

N. xxiii. ii. 2. Rectang. cov.-tablet. No writing visible; seal gone. Much warped and split. $10\frac{1}{2}'' \times 4\frac{1}{2}'' \times \frac{5}{8}''$ to $\frac{1}{8}''$.

N. XXIII. ii. 3. Oblong tablet, roughly trimmed, pierced at end for filing. No trace of writing left. Fairly hard, but bleached and split. $17\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{3}{4}''$.

N. XXIII. ii. 4. Rectang. strip of wood, perhaps part of box. *Obv.* along one edge a rabbet extends to $1\frac{1}{4}''$ from each end. Part of iron pin shows in rabbet and reappears on Rev. *Rev.* very faint traces of Khar. $6\frac{5}{16}'' \times 1\frac{3}{16}'' \times \frac{3}{16}''$.

N. XXIII. ii. 5. Wedge cov.-tablet, with seal cav. ($1\frac{1}{16}'' \times 1\frac{1}{2}''$) empty. *Obv.* to R. of cav. one l. Khar., to L. one l., faint. *Rev.* four ll. Khar. clear. Wood hard and well preserved. $13\frac{3}{4}'' \times 2''$.

N. XXIII. ii. 6. Rectang. under-tablet. *Obv.* eight ll. Khar., clear. *Rev.* blank. Corners chipped; wood hard. $6\frac{3}{8}'' \times 2\frac{3}{4}'' \times \frac{3}{8}''$.

N. XXIII. ii. 7. Rectang. double-tablet, complete. Opened. Cov.-tablet: *Obv.* traces of Khar. to R. and L. of empty seal cav. ($1'' \times 1''$). *Rev.* five ll. Khar. indistinct.

Under-tablet: *Obv.* six ll. Khar. *Rev.* blank. Hard and well preserved. $8\frac{5}{8}'' \times 3\frac{1}{2}'' \times \frac{1}{4}''$ to $\frac{3}{4}''$.

N. XXIII. ii. 8. Wedge cov.-tablet. *Obv.* 2″ from sq. end, seal cav. ($1\frac{5}{8}'' \times 1\frac{1}{4}''$) with clay seal (damaged) bearing same classical intaglio as N. XIII. ii. 10. By sq. end one l. Khar. Point side of seal one l. Khar. By hole usual character. *Rev.* one l. Khar. $14\frac{7}{8}'' \times 2\frac{1}{8}'' \times \frac{5}{8}''$ to $\frac{1}{4}''$.

N. XXIII. ii. 9. Oblong tablet. *Obv.* six ll. Khar., very clear. *Rev.* blank. $6'' \times 2\frac{1}{2}'' \times \frac{5}{16}''$.

N. XXIII. ii. 10. Oblong tablet. *Obv.* seven ll. Khar., faded but clear. *Rev.* two and a half ll. Khar., faint. Edges cut down after writing. $4\frac{3}{4}'' \times 2'' \times \frac{5}{16}''$.

N. XXIII. ii. 11. Oblong tablet. Two holes near one end. *Obv.* three ll. Khar., faded. *Rev.* blank. Bottom edge split off. $6\frac{3}{16}'' \times 1\frac{1}{8}'' \times \frac{1}{8}''$.

N. XXIII. ii. 12. Oblong tablet. *Obv.* four ll. Khar., faint. *Rev.* traces of one l. Khar. Wood hard. $13\frac{1}{2}'' \times 2\frac{3}{4}'' \times \frac{1}{2}''$.

N. XXIII. ii. 13. Wedge under-tablet. *Obv.* four ll. Khar., faint. *Rev.* two ll. Khar. near sq. end, very faint. $13\frac{3}{16}'' \times 2\frac{3}{4}'' \times \frac{1}{4}''$.

N. XXIII. ii. 14. Wedge cov.-tablet, with seal cav. ($1\frac{9}{16}'' \times 1\frac{5}{16}''$) retaining strings and traces of clay. *Obv.* to R. of cav. one short l. Khar., L. of cav. traces of Khar. *Rev.* two ll. Khar. Writing of *Obv.* very faint and encrusted; *Rev.* clearer. Hard and well preserved. $14\frac{1}{4}'' \times 2\frac{1}{4}'' \times \frac{5}{16}''$ to $\frac{11}{16}''$.

N. XXIII. ii. 15. Wedge under-tablet; sides almost parallel till $1\frac{1}{4}''$ from point; wood slightly warped. *Obv.* three ll. sprawling Khar., for most part clear. *Rev.* traces of Khar. chars. at sq. end. Good condition. $15'' \times 2\frac{1}{8}'' \times \frac{1}{4}''$.

N. XXIII. ii. 001. Wooden comb, round-topped, like L.A. VIII. 001. H. 3″; length of teeth 1″; width $2\frac{3}{4}''$; thickness $\frac{5}{16}''$; seven teeth to 1″.

N. XXIII. ii. 002. Wooden seal-case, unfinished. Rectangular block; at one end three saw-grooves for string, and hole pierced. Receptacle for clay begun but not finished. $4\frac{3}{8}'' \times 1\frac{1}{4}'' \times 1\frac{1}{4}''$.

N. XXIII. ii. 003. Piece of lacquered wood, cut roughly circular. One side flat, the other side slightly convex. Convex side lacquered brown with traces of a thin red line near edge. Rabbet round flat side. Prob. part of box lid. Diam. $2\frac{5}{8}''$ to $2\frac{3}{4}''$; thickness $\frac{3}{8}''$ to $\frac{1}{4}''$.

N. XXIII. ii. 004. Rounded stick, slightly tapering. Deep notch all round at broad end. Hair-pin? $9\frac{3}{8}'' \times \frac{5}{16}''$ to $\frac{1}{8}''$. Pl. XXVIII.

N. XXIII. ii. 005. Oval piece of horn, trough-shaped and curved with carefully rounded ends. Perhaps inkstand. Cf. N. XLI. 006. $3\frac{5}{8}'' \times \frac{7}{8}'' \times 1''$.

N. XXIII. iii. 1. Wedge under-tablet. *Obv.* three ll. Khar. *Rev.* blank. Good condition. $10\frac{3}{8}'' \times 2'' \times \frac{7}{16}''$.

N. XXIII. iii. 2. Rectang. under-tablet. *Obv.* eleven ll. Khar. *Rev.* blank. Writing faint and wood slightly decayed. $7\frac{1}{8}'' \times 3\frac{1}{8}'' \times \frac{3}{8}''$.

OBJECTS FOUND AT OR NEAR RUIN N. XXIV

N. XXIV. 002. Wooden stick bent U-shape with notched ends. Prob. a 'dead-eye' or primitive pulley used instead of a rope loop in hauling to avoid friction. Cf. N. XXIX. ii. 001. b. H. $2\frac{7}{8}''$; diam. $\frac{1}{2}''$ to $\frac{5}{16}''$; width 2″. Pl. XXVIII.

N. XXIV. 003. Wooden peg. Bark on thick part, but trimmed to a point. $4\frac{1}{4}'' \times \frac{3}{4}''$.

N. XXIV. 005. Wooden stick with bark on. Rough groove cut all round through bark $\frac{5}{8}''$ and 3″ from respective ends. $9\frac{3}{4}'' \times \frac{5}{16}''$.

N. XXIV. 006. Strip of wood, flat, narrow. At each end a short point projects from either corner, leaving a wide notch. Perhaps loom-stick for separating warp threads. $23\frac{1}{2}'' \times \frac{5}{8}'' \times \frac{3}{16}''$.

N. XXIV. 007. Piece of bronze wire, bent double. Broken each end. Gr. M. 1″; diam. $\frac{1}{16}''$.

N. XXIV. 008. Lozenge-shaped bronze plate. One corner broken off. Rivet in other corner. Hole ($\frac{1}{4}''$ diam.) in middle. $\frac{13}{16}''$ to break $\times \frac{3}{4}'' \times \frac{1}{32}''$.

N. XXIV. 009. Bronze rivet with round head. $\frac{5}{16}'' \times \frac{1}{8}''$; head $\frac{1}{4}'' \times \frac{1}{10}''$.

N. XXIV. 0010. Circular bronze bead, flat on both sides. $\frac{3}{16}''$ diam.; $\frac{1}{10}''$ thick.

N. XXIV. 0011. Small piece of sheet bronze. $\frac{3}{4}'' \times \frac{1}{2}'' \times \frac{1}{16}''$.

N. XXIV. 0012. Sixteen stone and glass beads; viz. one cornelian, faceted, spheroid; eight blue glass, one

rectangular bugle, three discoid, four ring; four opaque yellow glass, ring; one pale green translucent glass, ring; one dark blue glass paste, ring; one black haematite, irregular ring; cf. *Anc. Khotan*, ii. Pl. LXXIV, N. 0014. g and N. 0020. a. Also small oblong, cut from sheet bronze, pierced near one corner. Perhaps from scale armour. Cf. N. XII. 003.

N. XXIV. 0013. Part of bronze hoop, broken each end. Inside plain. Outside has a raised band of rough rope-pattern. Length of chord $1\frac{1}{2}''$; width of frame $\frac{1}{4}''$; thickness of frame $\frac{1}{8}''$. Pl. XXIX.

N. XXIV. 0014. Part of bronze 'grelot' bell. Cf. *Anc. Khotan*, ii. Pl. LXXIV, N. 0012. a. Gr. M. $\frac{5}{8}''$.

N. XXIV. 0015. Part of bronze ring, made of wire, oblong in section, of which ends are bent together and overlap. Diam. $\frac{1}{2}''$; width $\frac{1}{8}''$.

OBJECTS EXCAVATED IN RUIN N. XXIV

N. XXIV. i. 1. Rectang. under-tablet. Blank. Warped and split. $8\frac{1}{4}'' \times 2\frac{5}{8}'' \times \frac{3}{16}''$ to $\frac{5}{16}''$.

N. XXIV. i. 2. Rectang. cov.-tablet, perhaps belonging to N. XXIV. i. 1. Piece of string still in seal-case but clay gone. Warped. $6'' \times 2\frac{5}{8}'' \times \frac{1}{8}''$ to $\frac{3}{8}''$.

N. XXIV. i. 3. Oblong tablet, with hole near end. Surface perished. Blank. $3\frac{3}{4}'' \times 1'' \times \frac{5}{16}''$.

N. XXIV. i. 4. Half of rectang. cov.-tablet (R. of seal cavity). Surface bleached. Blank. $8\frac{1}{4}'' \times 1\frac{1}{4}'' \times \frac{3}{16}''$ to $\frac{5}{8}''$.

N. XXIV. ii. 1. Lathe-like tablet, broken at either end. No sign of writing. Very soft and brittle, but retains shape. $7'' \times 1\frac{3}{16}''$.

N. XXIV. ii. 2. Wedge cov.-tablet. At narrow end, here cut square, are two holes. *Obv.* $1\frac{7}{8}''$ from wide end, seal cav. ($1\frac{1}{8}''$ sq.). Across wide end three ll. Khar. By seal cav., hole side, two ll. Khar. *Rev.* four ll. Khar., very faint. Wood rotten and surface perished. $6\frac{3}{4}'' \times 1\frac{15}{16}'' \times \frac{11}{16}''$ to $\frac{1}{4}''$.

N. XXIV. ii. 3. Wedge under-tablet, ends broken. No trace of writing on either face. Much broken and in very bad state. $14\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{3}{8}''$.

N. XXIV. ii. 001. Thin wooden silhouette of a duck. On each side is a hole to indicate eye. Beak to tail $4\frac{1}{4}''$; breast to back $1\frac{5}{8}''$; thickness $\frac{3}{16}''$. Pl. XIV.

N. XXIV. iii. 1. Oblong tablet (fr. split off top). Sides notched to hold string. *Obv.* seven ll. Khar., very faint. *Rev.* blank. Hard and well preserved. $4\frac{3}{8}'' \times 2\frac{1}{2}'' \times \frac{1}{4}''$.

N. XXIV. iv. 1. Rectang. under-tablet. Blank. Wood soft and bleached. $8\frac{3}{4}'' \times 2'' \times \frac{1}{4}''$.

N. XXIV. iv. 2. Double-wedge tablet. Complete; unopened. Cov.-tablet: *Obv.* seal cav. ($1\frac{3}{16}'' \times 1\frac{1}{16}''$) $1\frac{3}{4}''$ from sq. end, with remains of oval seal, showing bearded head and L. shoulder of human fig. L. On each side of seal one l. Khar. Usual character by hole.

Under-tablet: *Rev.* one l. Khar. by sq. end. Sand-encrusted, but good condition. $8\frac{3}{4}'' \times 1\frac{5}{8}'' \times 1''$ to $\frac{5}{8}''$.

N. XXIV. iv. 001. Wooden weaver's comb, long truncated triangle. Very short teeth. Perhaps for carding. Hard and well preserved. $3\frac{9}{16}'' \times 1\frac{1}{2}''$. Pl. XXVIII.

N. XXIV. iv. 002. Wooden cantilever or double-bracket. Carved in relief. *Side ornament*: Plain moulding. Moulding decorated with overlapping V-shaped leaf orn., points meeting at centre. Plain billeted moulding, billets $3\frac{1}{2}''$ long, separated by bevelled squares. *Under ornament*: One side, circular eight-petalled rosette outside which extra petals fill up oblong space. Other side, two four-petalled lotus flowers with four sepals, oblong, divided by line of overlapping V-orn. between plain mouldings. Sq. capital (resting direct on the pillar); sides carved with upward-pointing petals. Mortise for top of pillar. Cf. *Anc. Khotan*, Pl. LXIX. $22\frac{1}{2}'' \times 8\frac{3}{4}'' \times 4\frac{1}{2}''$ to $2''$; diam. of pillar $4\frac{1}{2}''$. Pl. XVIII.

N. XXIV. v. 1. Takhtī-shaped tablet. *Obv.* one long and two short ll. Khar. *Rev.* five ll. Khar. Writing very faint. Wood hard. $16'' \times 2\frac{1}{2}'' \times \frac{1}{2}''$.

N. XXIV. vi. 1. Oblong board with faded Khar. writing on each side. *Obv.* six to seven ll. in large characters. *Rev.* five to six ll. in large characters and apparently disjointed remarks in smaller characters, taking one to two lines near one edge. Much twisted and scored by knife-cuts. $2'\ 11'' \times 5\frac{3}{4}'' \times \frac{3}{8}''$. Pl. XXV.

N. XXIV. vi. 2. Oblong tablet. *Obv.* along upper edge row of Khar. characters with the long strokes carried down from each and curved over to form lotus-petal border along lower edge. *Rev.* split off. Good condition; ends broken. $6\frac{1}{2}'' \times 1\frac{3}{8}'' \times \frac{3}{16}''$.

N. XXIV. vi. 3. Oblong tablet. Hole in corner. Other end bevelled. *Obv.* convex, six columns Khar. (five with eight or nine ll., one with three). *Rev.* flat, blank. $9\frac{3}{8}'' \times 2\frac{7}{8}'' \times \frac{1}{2}''$.

N. XXIV. vi. 4. Takhtī-shaped tablet with round pierced handle. *Obv.* four ll. Khar., very faint. *Rev.* three ll. Khar. very faint. Hard and well preserved. $7\frac{7}{16}'' \times 1\frac{1}{2}''$.

N. XXIV. vi. 001. Upper part of wooden board, with projecting frame orn., with double row of 'dog tooth' set back to back. Blank. The surface though dry is cracked and peeling. $20\frac{1}{2}'' \times 3'' \times \frac{3}{4}''$.

N. XXIV. vii. 1. Rectang. double tablet. Opened and string lost. Seal cav. ($1\frac{1}{16}'' \times 1''$) empty. Cov.-tablet: *Obv.* one and a half ll. Khar. across the end and some Khar. chars. near seal cav., clear. *Rev.* blank.

Under-tablet: *Obv.* three and a half ll. Khar., clear. Good condition. $6\frac{5}{8}'' \times 2\frac{1}{4}'' \times \frac{5}{16}''$.

N. XXIV. viii. 1. Wedge cov.-tablet. Seal cav. ($1\frac{1}{4}'' \times$

$1\frac{1}{4}''$) empty. No writing distinguishable on *Obv.* or *Rev.* Very soft and in bad state. $10\frac{3}{16}'' \times 1\frac{7}{8}'' \times \frac{1}{8}''$ to $\frac{1}{2}''$.

N. xxiv. viii. 2. Wedge under-tablet. *Obv.* four ll. Khar., faint. *Rev.* blank, but has three sawn grooves to keep string from slipping. $9\frac{1}{2}'' \times 2'' \times \frac{1}{4}''$.

N. xxiv. viii. 3. Takhti-shaped tablet. Handle pierced and marked by two notches cut on each side. *Obv.* four columns (3, 2, 4, 4 ll.) Khar. *Rev.* one l. Khar. Wood and writing both in good condition. $12'' \times 1\frac{7}{16}'' \times \frac{1}{8}''$. Pl. XXV.

N. xxiv. viii. 4. Wedge cov.-tablet. Seal cav. ($1\frac{3}{16}'' \times 1\frac{5}{16}''$) empty. *Obv.* one l. Khar. by sq. end; one l. point side of cav.; usual character near point. *Rev.* one l. Khar. Writing black and clear. Hard and well preserved. $9\frac{1}{8}'' \times 2'' \times \frac{1}{8}''$ to $\frac{5}{8}''$.

N. xxiv. viii. 5. Oblong tablet. *Obv.* six ll. Khar., very clear. *Rev.* six ll. Khar., faded. Hard and in excellent condition. $5\frac{5}{8}'' \times 2\frac{3}{4}'' \times \frac{1}{2}''$. Pl. XXVI.

N. xxiv. viii. 6. Wedge cov.-tablet. Seal cav. with impression from gem of Athene Promachos; gem was in sq. setting whereon Khar. characters engraved. At sq. end one l. Khar., clear; at point one char. Khar. *Rev.* blank. $1'\ 10'' \times 1\frac{7}{8}''$. Pl. XX.

N. xxiv. viii. 7. Wedge cov.-tablet. *Obv.* seal cav. ($1\frac{3}{16}'' \times 1\frac{1}{16}''$), empty $1\frac{5}{16}''$ from sq. end. By sq. end one l. Khar. Point side of seal one l. Khar. By hole usual char. *Rev.* one short l. Khar. by sq. end. $9\frac{1}{8}'' \times 1\frac{15}{16}'' \times \frac{5}{8}''$ to $\frac{1}{8}''$.

N. xxiv. viii. 8. Oblong tablet, semi-elliptical in section Hole near one end. *Obv.* (convex surface) blank. *Rev.* (flat) four ll. Khar. faint but clear, across end without hole. Good condition. $7\frac{1}{8}'' \times 1\frac{1}{2}'' \times \frac{3}{8}''$ max.

N. xxiv. viii. 9. Wedge under-tablet, afterwards used afresh for a second purpose. Hole at point broken and second hole pierced $2\frac{3}{4}''$ from point. *Obv.* four ll. Khar. *Rev.* sixteen ll. Khar. written across. One l. Khar. written lengthways. Good condition. $14\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{1}{4}''$. Pl. XXIV.

N. xxiv. viii. 10. Wedge cov.-tablet. Seal cav. ($1\frac{3}{8}'' \times 1\frac{1}{2}''$) empty. *Obv.* one l. Khar. at sq. end; single char. on point side of cav.; usual char. near point. *Rev.* one l. Khar. black and clear. Hard and well preserved. $8\frac{3}{4}'' \times 1\frac{7}{8}'' \times \frac{1}{8}$ to $\frac{11}{16}''$.

N. xxiv. viii. 11. Oblong tablet; end broken; hole at broken end. *Obv.* convex, three ll. Khar. *Rev.* three ll. Khar. Writing clear though faded. Hard and in good condition. $7\frac{1}{2}'' \times 1\frac{1}{2}'' \times \frac{5}{16}''$.

N. xxiv. viii. 12. Wedge under-tablet. *Obv.* three ll. Khar., black, very clear. *Rev.* one l. Khar. (three chars.) at sq. end. Excellent condition. $8\frac{1}{2}'' \times 1\frac{1}{4}'' \times \frac{3}{16}''$.

N. xxiv. viii. 13. Wedge cov.-tablet. Seal cav. ($1\frac{1}{4}''$ sq.) empty. *Obv.* one l. Khar. at sq. end, three Khar. chars. on point side of cavity; usual char. at point; fairly clear. *Rev.* one l. Khar., clear. Good condition. $9\frac{5}{8}'' \times 1\frac{3}{4}'' \times \frac{1}{8}''$ to $\frac{3}{8}''$.

N. xxiv. viii. 14. Elliptical tablet. *Obv.* three ll. Khar. Inscr. black but sand-encrusted. *Rev.* four ll. Khar. Inscr. black but sand-encrusted. Wood well preserved. $5\frac{1}{2}'' \times 2'' \times \frac{1}{4}''$.

N. xxiv. viii. 15. Wedge cov.-tablet. Seal cav. ($1\frac{9}{16}'' \times 1\frac{3}{8}''$) empty. *Obv.* one l. Khar. at sq. end, two Khar. chars. on point side of cavity, and usual char. at point; clear. *Rev.* three ll. Khar. clear. Good condition. $8\frac{7}{8}'' \times 1\frac{7}{8}'' \times \frac{1}{8}''$ to $\frac{5}{8}''$.

N. xxiv. viii. 16. Wedge under-tablet. *Obv.* three ll. Khar. *Rev.* two ll. Khar. at sq. end. Good condition. $6\frac{3}{4}'' \times 1\frac{3}{4}'' \times \frac{3}{16}''$.

N. xxiv. viii. 17. Wedge under-tablet. *Obv.* six ll. Khar., small, black, and very clear. *Rev.* one l. Khar. near sq. end. Very good condition. $8\frac{3}{4}'' \times 1\frac{7}{8}'' \times \frac{1}{8}''$.

N. xxiv. viii. 18. Oblong tablet, pierced at one end. *Obv.* two columns Khar., of three and two very short ll.; clear. *Rev.* blank. Hard and excellently preserved. $5\frac{1}{2}'' \times 1\frac{1}{8}'' \times \frac{5}{16}''$.

N. xxiv. viii. 19. Wedge cov.-tablet. Seal cav. ($1\frac{3}{8}'' \times 1\frac{1}{8}''$) empty. *Obv.* three groups Khar. chars., faint but clear, on either side of seal cav., and usual char. at point. *Rev.* three ll. Khar., clear. Good condition. $6\frac{3}{4}'' \times 1\frac{3}{4}'' \times \frac{1}{8}''$ to $\frac{5}{8}''$.

N. xxiv. viii. 20. Wedge under-tablet. Broken. *Obv.* four ll. Khar., very black and clear. *Rev.* one l. Khar. by sq. end. Good condition. $9\frac{1}{16}'' \times 2\frac{1}{16}'' \times \frac{3}{16}''$. Pl. XXVII.

N. xxiv. viii. 21. Oblong tablet, pierced in one corner L. *Obv.* five ll. Khar., much faded. *Rev.* blank. Hard and well preserved. $4\frac{3}{4}'' \times 2'' \times \frac{1}{4}''$.

N. xxiv. viii. 22. Wedge cov.-tablet. Seal cav. ($1\frac{1}{2}'' \times 1\frac{1}{8}''$) empty. *Obv.* one l. Khar., very clear, on each side of cav., usual char. at point. *Rev.* four ll. Khar. (sprawling) very black and clear. Excellent condition. $9\frac{1}{8}'' \times 2'' \times \frac{1}{8}''$ to $\frac{3}{8}''$.

N. xxiv. viii. 23. Wedge under-tablet. *Obv.* three ll. large Khar., blotted in places but otherwise clear. *Rev.* one l. Khar., faint at sq. end. Well preserved. $9'' \times 1\frac{7}{8}'' \times \frac{1}{8}''$.

N. xxiv. viii. 24. Oblong tablet, with hole at rounded end. *Obv.* four columns Khar. of 3, 3, 3, and 4 ll., faded but clear. *Rev.* one l. Khar., faded. Hard and well preserved. $5\frac{1}{16}'' \times 1\frac{1}{8}'' \times \frac{1}{4}''$.

N. xxiv. viii. 25. Oblong tablet. Hole for string in corner. *Obv.* four columns Khar. of 2, 4, 5, and 6 ll. *Rev.* blank. $7\frac{3}{4}'' \times 2\frac{1}{2}'' \times \frac{3}{16}''$.

N. xxiv. viii. 26. Label-like tablet with hole at wedge-shaped end. *Obv.* blank. *Rev.* traces of ink. Wood in good condition. $6'' \times 1\frac{5}{8}'' \times \frac{3}{16}''$.

N. xxiv. viii. 27. Label-like tablet with string-hole at

rounded end. *Obv.* two columns Khar., each three ll. *Rev.* one l. Khar. Writing much faded, wood hard. $4\frac{1}{8}'' \times 1\frac{3}{8}'' \times \frac{3}{8}''$.

N. xxiv. viii. 28. Oblong tablet. *Obv.* most of surface cut away. Part of two ll. Khar. preserved. Clear. *Rev.* five ll. Khar. lengthways, much faded, and three ll. across one end, smaller, and clear. $9\frac{3}{8}'' \times 2\frac{3}{8}'' \times \frac{1}{2}''$.

N. xxiv. viii. 29. Wedge cov.-tablet. Seal cav. ($1\frac{1}{4}'' \times 1\frac{5}{8}''$) empty. *Obv.* one l. Khar. at sq. end; one letter Khar. on point side of cav.; usual char. near point. *Rev.* one l. Khar. very clear. Hard and well preserved. $9\frac{7}{8}'' \times 1\frac{7}{8}'' \times \frac{3}{16}''$ to $\frac{3}{4}''$.

N. xxiv. viii. 30. Wedge cov.-tablet. Seal cav. ($1\frac{7}{16}'' \times 1\frac{1}{16}''$) empty. *Obv.* one l. Khar. at sq. end (very faint); usual char. near point. *Rev.* three ll. Khar., clear. Hard and well preserved. $10'' \times 1\frac{3}{8}'' \times \frac{1}{4}''$ to $\frac{9}{16}''$.

N. xxiv. viii. 31. Wedge under-tablet. *Obv.* five ll. Khar., very clear. *Rev.* one l. Khar. near sq. end. Excellent condition. $9\frac{7}{8}'' \times 2\frac{1}{4}'' \times \frac{1}{4}''$.

N. xxiv. viii. 32. Tablet made of cleft stick, untrimmed, one end notched. *Obv.* one l. Khar. (faint) near upper edge of point. *Rev.* four ll. Khar., much obscured. Hard, but surface in poor condition. $10'' \times 1\frac{1}{4}'' \times \frac{3}{4}''$.

N. xxiv. viii. 33. Wedge cov.-tablet. *Obv.* $1\frac{7}{8}''$ from sq. end, seal cav. with one side broken away ($1\frac{3}{8}'' \times \frac{7}{8}''$); by sq. end one l. Khar.; one letter Khar. point side of cav. and usual char. by hole. *Rev.* two ll. Khar., clear. Good condition. $8\frac{1}{2}'' \times 1\frac{1}{4}'' \times \frac{5}{8}''$ to $\frac{1}{4}''$.

N. xxiv. viii. 34. Tongue-shaped tablet, broad end broken. *Obv.* seven ll. Khar. *Rev.* seven ll. Khar. Writing very clear. Hard and in good condition. $9'' \times 3\frac{1}{4}''$ max. $\times \frac{1}{2}''$.

N. xxiv. viii. 35. Double-wedge tablet, complete, but seal strings broken. Seal cav. ($1\frac{1}{2}'' \times 1\frac{1}{2}''$) empty. Cov.-tablet: *Obv.* traces of Khar. at sq. end; usual char. near point. *Rev.* one l. Khar.

Under-tablet: *Obv.* five ll. Khar. obscure. Good condition, much encrusted. $8\frac{7}{8}'' \times 2'' \times \frac{1}{4}''$ to $\frac{7}{8}''$.

N. xxiv. viii. 36. Label-like tablet, with rounded ends, and hole for string. *Obv.* rounded, one l. Khar. *Rev.* flat, three ll. Khar. Writing and wood in good condition. $3\frac{3}{8}'' \times 1\frac{1}{8}'' \times \frac{5}{16}''$.

N. xxiv. viii. 38. Label-like tablet, one end pointed and pierced. *Obv.* four ll. Khar. in three columns. *Rev.* blank. Hard and in good condition. $8\frac{1}{4}'' \times 1\frac{7}{16}'' \times \frac{1}{4}''$.

N. xxiv. viii. 39. Wedge under-tablet. *Obv.* four ll. Khar. clear. *Rev.* one l. Khar. near sq. end. Good condition. $9'' \times 2'' \times \frac{5}{16}''$.

N. xxiv. viii. 40. Wedge cov.-tablet, seal cav. ($1\frac{1}{4}'' \times 1\frac{3}{4}''$) empty. *Obv.* one l. Khar. at sq. end. Usual char. near point. *Rev.* three ll. Khar., clear. Hard and well preserved. $10\frac{1}{4}'' \times 2\frac{1}{8}'' \times \frac{3}{16}$ to $\frac{5}{8}''$.

N. xxiv. viii. 41. a, b. Rectang. under-tablet, in two frs. (joined). *Obv.* five ll. Khar. clear. *Rev.* blank. Good condition. $9'' \times 3\frac{7}{8}''$ (joined) $\times \frac{1}{4}''$.

N. xxiv. viii. 42. Stick-like tablet. One third distance from end, groove roughly cut all round. *Obv.* rounded. By groove short side one l. Khar. across, then three cols. Khar. of (from end) 3, 3, and 4 ll. Long side three ll. Khar. *Rev.* flat. Between groove and near end three cols. Khar. of (from end) 3, 4, and 2 ll. Condition fair. $22'' \times 1\frac{1}{2}'' \times \frac{3}{8}''$. Pl. XXV.

N. xxiv. viii. 43. Wedge cov.-tablet, seal cav. ($1\frac{1}{4}'' \times 1\frac{1}{2}''$) empty. *Obv.* one l. Khar. at sq. end; usual char. near point. *Rev.* one l. Khar., faded but clear. Hard and well preserved. $10\frac{1}{4}'' \times 2\frac{3}{8}'' \times \frac{1}{4}''$ to $\frac{3}{4}''$.

N. xxiv. viii. 44. a. Wedge under-tablet. *Obv.* four ll. Khar. *Rev.* one l. Khar. near sq. end. Excellent condition. $9\frac{5}{8}'' \times 2'' \times \frac{3}{16}''$. Pl. XXVII.

N. xxiv. viii. 44. b. Rectang. under-tablet. *Obv.* six ll. Khar. clear. *Rev.* blank. Good condition. $9\frac{1}{4}'' \times 2\frac{1}{2}'' \times \frac{1}{2}''$.

N. xxiv. viii. 45. Wedge under-tablet. *Obv.* three ll. Khar., clear except at point; lower edge has two converging notches cut upon it. *Rev.* blank. Excellently preserved. $9\frac{5}{8}'' \times 1\frac{7}{8}'' \times \frac{1}{4}''$.

N. xxiv. viii. 46. Wedge under-tablet, point lost. *Obv.* three ll. Khar., clear. *Rev.* one l. Khar. at sq. end. Faint. Hard and well preserved. $6\frac{5}{8}'' \times 1\frac{3}{4}'' \times \frac{1}{8}''$.

N. xxiv. viii. 47. Narrow flat strip of wood, like N. xxiv. 006, q.v. $20\frac{3}{4}'' \times \frac{1}{2}'' \times \frac{3}{16}''$.

N. xxiv. viii. 48. Wedge under-tablet. *Obv.* four ll. Khar. *Rev.* one l. Khar. near sq. end. Excellent condition. $10\frac{1}{2}'' \times 1\frac{7}{8}'' \times \frac{1}{8}''$.

N. xxiv. viii. 49. Wedge cov.-tablet. *Obv.* $1\frac{1}{4}''$ from sq. end seal cav. ($1\frac{5}{8}'' \times 1\frac{1}{8}''$) empty. By sq. end one l. Khar. *Rev.* four ll. Khar. Good condition. Writing faint. $8'' \times 1\frac{5}{8}'' \times \frac{5}{8}''$ to $\frac{1}{8}''$.

N. xxiv. viii. 50. Oblong tablet. *Obv.* two columns Khar. (four ll. and three ll.) faint. *Rev.* five ll. Khar. Good condition. $6\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{7}{16}''$.

N. xxiv. viii. 51 + 64. Double-wedge tablet, complete. Cov.-tablet: *Obv.* $1\frac{1}{4}''$ from sq. end seal cav. with remains of string and seal ($1\frac{1}{2}'' \times 1\frac{1}{4}''$). One l. Khar. at sq. end. *Rev.* two ll. Khar.

Under-tablet: *Obv.* three ll. Khar. *Rev.* No writing visible. Cross-cut half way. Good condition. $8\frac{5}{8}'' \times 2'' \times \frac{3}{4}''$. Pl. XXVII.

N. xxiv. viii. 52. Wedge under-tablet. *Obv.* three ll. Khar. *Rev.* one l. Khar. at sq. end. Good condition. $10\frac{1}{8}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

N. xxiv. viii. 53. Label-like tablet with wedge end, near which hole. *Obv.* two ll. Khar. over whole length, and one short l. *Rev.* blank. $11\frac{1}{4}'' \times 1\frac{3}{8}'' \times \frac{3}{16}''$.

N. xxiv. viii. 54. Wedge cov.-tablet. *Obv.* $1\frac{3}{8}''$ from

sq. end seal cav. ($1\frac{3}{16}'' \times \frac{15}{16}''$). One l. Khar. by sq. end; usual char. near hole. *Rev.* four ll. Khar., faded. Good condition. $10\frac{1}{8}'' \times 1\frac{7}{8} \times \frac{9}{16}''$ to $\frac{1}{8}''$.

N. xxiv. viii. 55. Wedge under-tablet. *Obv.* three ll. Khar. *Rev.* near sq. end one l. Khar., faint. Good condition. $10'' \times 1\frac{3}{8}'' \times \frac{1}{4}''$.

N. xxiv. viii. 56. Wedge cov.-tablet. *Obv.* $1\frac{3}{4}''$ from sq. end seal cav. ($1\frac{1}{4}'' \times 1\frac{1}{8}''$). By sq. end one l. Khar., two ll. point side of seal. Usual char. by hole. *Rev.* three ll. Khar. Good condition. $9\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{11}{16}''$ to $\frac{1}{8}''$.

N. xxiv. viii. 57. Label-like tablet, broken, with hole at wedge-shaped end. *Obv.* rounded, one l. Khar. very faint. *Rev.* flat, two ll. Khar., very faint. $6'' \times \frac{3}{4}'' \times \frac{1}{4}''$.

N. xxiv. viii. 58. Wedge under-tablet. *Obv.* four ll. Khar. *Rev.* one l. Khar. near sq. end. Good condition. $10\frac{1}{8}'' \times 1\frac{7}{8}'' \times \frac{3}{16}''$.

N. xxiv. viii. 59. Label-like tablet, with hole at wedge-shaped end. *Obv.* four ll. Khar. *Rev.* five cols. Khar. (1, 5, 5, 5, 6 ll.). Good condition. $6'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$. Pl. XXVI.

N. xxiv. viii. 60. Wedge cov.-tablet. *Obv.* $1\frac{5}{8}''$ from sq. end seal cav. ($1\frac{1}{2}'' \times 1\frac{1}{4}''$) with string. By sq. end one l. Khar. *Rev.* by sq. end one l. Khar. Good condition. $9\frac{3}{4}'' \times 1\frac{7}{8}'' \times \frac{1}{8}$ to $\frac{11}{16}''$.

N. xxiv. viii. 61. Oblong tablet. *Obv.* covered with eight columns of Khar. each consisting of eight short ll. Hole in L. upper corner for filing. *Rev.* has been planed down but remains of one l. of Khar. on bevelled upper edge. Writing clear though faded. Hard and in good condition. $13'' \times 3\frac{1}{4}''$. Pl. XXV.

N. xxiv. viii. 62. Flat wooden strip, at one end sq., at other rounded. Two notches opposite one another on each edge. No trace of writing. $7\frac{1}{16}'' \times \frac{1}{2}'' \times \frac{1}{8}''$.

N. xxiv. viii. 63. Wedge cov.-tablet. *Obv.* $1\frac{1}{4}''$ from sq. end seal cav. ($1\frac{3}{16}'' \times 1\frac{5}{16}''$), one l. Khar. by sq. end. One l. Khar. point side of seal. Usual char. by point. *Rev.* two ll. Khar. $9\frac{5}{8}'' \times 2\frac{1}{8}'' \times \frac{7}{8}''$ to $\frac{1}{8}''$.

N. xxiv. viii. 65. Oblong tablet (broken). *Obv.* short l. of Khar. in lower R. corner. *Rev.* four (?) ll. Khar., almost illegible. Hard and good condition. $4\frac{3}{8}'' \times 1\frac{7}{8}''$.

N. xxiv. viii. 66. Wedge cov.-tablet. *Obv.* $1\frac{1}{4}''$ from sq. end seal cav. ($1\frac{1}{4}''$ sq.). By sq. end one l. Khar. Usual char. by hole. *Rev.* blank. Good condition. $9\frac{1}{2}'' \times 1\frac{11}{16}'' \times \frac{9}{16}''$ to $\frac{3}{16}''$.

N. xxiv. viii. 67. Wedge under-tablet. Much sand-encrusted, but wood and writing in excellent condition. *Obv.* three ll. Khar. *Rev.* one l. Khar. at sq. end. $9\frac{1}{2}'' \times 1\frac{5}{8}'' \times \frac{3}{16}''$.

N. xxiv. viii. 68. Oblong tablet. *Obv.* edges bevelled. One and a half ll. Khar. lengthways. *Rev.* two cols. each of five ll. Khar. Sand-encrusted, but legible; wood in good condition. $11\frac{1}{4}'' \times 2\frac{3}{8}'' \times \frac{1}{4}''$. Pl. XXVI.

N. xxiv. viii. 69. Wedge under-tablet. *Obv.* four ll. Khar. very faint. *Rev.* much encrusted. Blank. Wood hard. $9'' \times 2\frac{1}{8}'' \times \frac{3}{16}''$.

N. xxiv. viii. 70. Wedge cov.-tablet. *Obv.* $1\frac{3}{8}''$ from sq. end seal cav. ($1\frac{1}{4}''$ sq.) one l. Khar. at sq. end. By hole usual char. *Rev.* one l. Khar. at top edge. Good condition. $10'' \times 2\frac{1}{4}'' \times \frac{1}{4}''$ to $\frac{7}{8}''$.

N. xxiv. viii. 71. Rectang. double tablet, complete, unopened. Cov.-tablet, $3\frac{1}{8}'' \times 2\frac{1}{16}''$: *Obv.* seal cav. ($1\frac{1}{8}'' \times 1\frac{9}{16}''$) with strings and clay filling. Impression, circular, concave, diam. $\frac{7}{8}''$. Human fig. full front, barbarous, and dismembered; head, shoulders, short flounced skirt (?), and lower legs prominent and unconnected. Objects in R. and L. hands (?). Legs rendered by four slight strokes; on either side a three-lobed object; cable border. Same design on N. xxiv. viii. 72, 76. Above seal two ll., below one l. Khar., clear.

Under-tablet: *Rev.* blank. $4\frac{3}{8}'' \times 2\frac{3}{16}'' \times \frac{3}{8}''$ to $\frac{3}{4}''$. Pl. XXIII.

N. xxiv. viii. 72. Rectang. double tablet, complete, unopened. Cov.-tablet. *Obv.* seal cav. ($1'' \times 1\frac{3}{16}''$). Strings and seal of pink clay intact. Circular impression. Same design as N. xxiv. viii. 71 and 76. Above seal, two ll. Khar., black and clear, below one l. Khar., black and clear. Hard and well preserved but some incrustation. $8\frac{7}{8} \times 3\frac{5}{16}'' \times \frac{5}{16}''$ to $\frac{5}{8}''$. Pl. XX.

N. xxiv. viii. 73. Rectang. double tablet. Complete; unopened, or opened and re-sealed in antiquity. Strings tied below and given extra seal on *Rev.* of under-tablet. Whole seal cav. then wrapped in yellow silk and tied round with coarse string. Cov.-tablet: *Obv.* Seal cav. $1\frac{5}{8}'' \times 1\frac{1}{2}''$; grey clay seal with two impressions. (*a*) Standing male fig. L. wears turban (?) with peak, long drapery girdled at waist, and overfall behind. Full sleeves. L. arm extended; R. holds long sceptre; hair tied with two long fillets. Archaistic Zeus. Classical work; see N. xxiv. viii. 81. (*b*) Head, R., strongly marked features, long curly hair; see N. xxiv. viii. 81. Across each end two ll. Khar.

Under-tablet: *Rev.* two ll. Khar. across end. $5\frac{1}{4}'' \times 2'' \times \frac{1}{4}''$ to $\frac{7}{8}''$. Pl. XXIII.

N. xxiv. viii. 74. Rectang. double tablet, unopened. Cov.-tablet: *Obv.* with seal cav. ($1\frac{1}{8}'' \times 1\frac{1}{8}''$). Strings and seal of pink clay intact. Impression of sq. seal with four Chinese chars. in angular Seal writing, equivalent in modern script to 鄯 善 郡 印 *Shan-shan chün yin*, 'Seal of the Shan-shan Command' [Mr. L. C. Hopkins]. Two ll. Khar., faint but legible. Hard and well preserved. $7\frac{3}{4}'' \times 3\frac{3}{16}'' \times \frac{7}{16}''$ to $\frac{3}{4}''$. Pl. XX.

N. xxiv. viii. 75. Rectang. double tablet. Complete. Strings tied behind. Unopened, or opened and re-sealed in antiquity. Cov.-tablet: *Obv.* Seal cav. $1''$ sq.; seal in pink clay with same device as N. xxiv. viii. 83; see *Anc. Khotan*, ii. Pl. LXXII, N. xv. 133. a. Talons and R. wing of eagle destroyed. Above seal, two ll. Khar., very faint.

Under-tablet: *Rev.* blank. Good condition. $7\frac{3}{4}'' \times 2\frac{3}{4}'' \times \frac{5}{16}''$ to $1\frac{1}{8}''$.

N. xxiv. viii. 76. Rectang. double tablet, unopened. Cov.-tablet: *Obv.* Seal cav. ($1\frac{1}{4}'' \times 1\frac{1}{16}''$) with strings and clay intact. Circular seal having same design as N. xxiv. viii. 71, but less disjointed. One l. Khar. above seal, very faint. Flange at lower L. end of under-tablet orn. with diamond pattern. Under-tablet: *Rev.* blank. Hard and in good condition; but lower tablet split. $8\frac{1}{2}'' \times 3\frac{5}{8}'' \times \frac{1}{4}''$ to $\frac{13}{16}''$.

N. xxiv. viii. 77. Rectang. double tablet. Complete; opened. Cov.-tablet: *Obv.* Seal cav. ($1\frac{5}{16}'' \times 2\frac{9}{16}''$) with seals preserved in three oblong impressions. R. (1) two ll. writing in relief, perpendicular, very faint. Script uncertain. C. (2) Large head R.; face destroyed. Ear small and pointed; hair in roll behind with comb at top of head. L. (3) Head and bust in low relief R. R. hand holds a flower. Nose aquiline. Hair in big waves tied by bead fillet, one end of which falls down back, one over shoulder. Faint. Good original, prob. imported. Above seal, two ll. Khar. Below seal, two ll. Khar. clear. *Rev.* six ll. Khar. clear. Under-tablet: *Obv.* six ll. Khar., clear. *Rev.* blank. $8\frac{7}{8}'' \times 3\frac{1}{8}'' \times \frac{5}{16}''$ to $1\frac{1}{8}''$.

N. xxiv. viii. 78. Rectang. double tablet. Complete. With cover ($6\frac{1}{2}'' \times 3\frac{1}{4}''$) and strings intact. Cov.-tablet: *Obv.* seal cav. ($2\frac{5}{8}'' \times 1\frac{7}{8}''$) with oval impression. Apparently two figs. On L. nude fig. apparently female, facing R., legs crossed and R. arm raised to head; half sitting. On R. fig. not clear, apparently male, L., leaning slightly forwards; L. arm behind and bent at elbow, R. hand advanced to thigh of other fig., R. knee raised and bent, with foot behind L. calf (?). Bad impression in fibrous clay, prob. from good classical orig. Part of embossed border shows. Above seal, two ll. Khar. Below seal, one l. Khar. Under-tablet: *Rev.* blank. $8\frac{3}{4}'' \times 3\frac{5}{16}'' \times \frac{7}{8}''$ to $\frac{1}{8}''$.

N. xxiv. viii. 79. Rectang. double tablet, unopened, with cover ($5\frac{3}{16}'' \times 2\frac{3}{4}''$). Cov.-tablet: *Obv.* seal cav. ($1\frac{1}{16}'' \times 1\frac{3}{4}''$) with strings and clay filling intact. Two seals: (i) oval, flat field; bust of woman L., with R. arm raised, smelling flower (?); head slightly inclined; hair falls in tail down upon shoulders. Elbow and lower part of body cut off by railing forming a kind of exergue (cf. *Anc. Khotan*, ii. Pl. LXXII, N. xv. 155). (ii) oval intaglio with flat field, 'impressionist' sketch of bird in flight (cf. *Anc. Khotan*, ii. Pl. LXXII, N. xxiii. 1). Poor work. Above seals, four ll. Khar., black and clear; below, two ll. Khar. equally good. $6\frac{3}{4}'' \times 2\frac{3}{4}'' \times \frac{3}{8}''$ to $\frac{7}{8}''$. Pl. XX.

N. xxiv. viii. 80. Rectang. double tablet, unopened, with cover ($7'' \times 3\frac{5}{8}''$). Cov.-tablet: *Obv.* seal cav. ($1\frac{1}{16}'' \times 1\frac{1}{4}$), has clay and one string intact. Circular stamp on flat field, Indian head R., bearded, hair done in two rings and knob at top. Back hair falls in close mass on nape of neck. L. hand raised holding fly-whisk or some symbol of office (thunderbolt ?). Coarse work. Four ll. Khar. above seal, black and clear. Below, one l. Khar., also very black. Hard and well preserved. $9\frac{15}{16}'' \times 3\frac{1}{2}'' \times \frac{1}{4}''$ to $\frac{13}{16}''$. Pl. XX, XXII.

N. xxiv. viii. 81. Rectang. double tablet, unopened. Cov.-tablet ($4\frac{7}{8}'' \times 2\frac{11}{16}''$): *Obv.* seal cav. ($1\frac{11}{16}'' \times 2''$) with strings and seal intact. Two impressions: (i) oval $\frac{3}{4}'' \times \frac{1}{2}''$. Bearded fig. wearing fillet with long ends strides to L., drapery clinging to L. leg, L. arm outstretched. In front of face is long sceptre held in R. hand. Classical work. Archaistic Zeus. See N. xxiv. viii. 73. (ii) oval $\frac{5}{8}'' \times \frac{3}{4}''$. Flat field, plain border, head with long hair falling down sides. (Cf. Lübke-Semran, *Die Kunst des Altertums*, Abb. 421, e. Medusa.) Local work, see N. xxiv. viii. 73. Above and below seals resp., two ll. Khar. Under-tablet: *Rev.* eight full ll. Khar. written across smaller dimension of tablet. A little lower is one l. Khar. alone. Further down, a col. of five short ll. Writing much obscured by encrustation. Hard and well preserved. $6\frac{13}{16}'' \times 2\frac{11}{16}'' \times \frac{3}{8}''$ to $1\frac{1}{8}''$. Pl. XX.

N. xxiv. viii. 82. Rectang. double tablet, unopened. Cov.-tablet: *Obv.* seal cav. ($1\frac{1}{16}'' \times 1\frac{1}{8}''$) with strings intact. Clay seal with impress of oval intaglio, a bird, R., with wings expanded and fan-like tail. Above seal, two ll. Khar., clear though slightly faded. Hard and well preserved. $8'' \times 3'' \times \frac{7}{16}$ to $1''$. Pl. XXIII.

N. xxiv. viii. 83. Rectang. double tablet, unopened, with cover ($7'' \times 3\frac{1}{2}''$). Cov.-tablet: *Obv.* seal cav. ($1\frac{1}{8}'' \times 1\frac{3}{16}''$) with strings and seal of pink clay intact. Circular seal $\frac{15}{16}''$ diam.; flat field, narrow milled border; soaring eagle, wings and legs outstretched as N. xxiv. viii. 75 (*Anc. Khotan*, ii. Pl. LXXII, N. xv. 133. a). Poor work. Above seal, two ll. Khar., faint.

Under-tablet: *Rev.* incised pentagon with Khar. inscr. at R. and L. points. Ink faded, but forms of letter remain. Hard and well preserved. $9\frac{3}{16} \times 3\frac{1}{2}'' \times \frac{3}{8}''$ to $1''$. Pl. XX.

N. xxiv. viii. 84. Rectang. double tablet. Complete; unopened; five strings broken, one intact. Cov.-tablet: *Obv.* seal cav. ($2\frac{3}{16}'' \times 1\frac{1}{8}''$) has much damaged seal in pink clay, perhaps bearing same device as N. xxiv. viii. 82. Below seal, three ll. Khar.

Under-tablet: *Rev.* blank. $8\frac{3}{8}'' \times 2\frac{1}{2}'' \times \frac{5}{8}''$ to $1\frac{1}{4}''$.

N. xxiv. viii. 85. Rectang. double tablet, unopened (cover $7\frac{7}{8}'' \times 2\frac{5}{8}''$). Cov.-tablet: *Obv.* seal cav. ($2\frac{3}{8}'' \times 1\frac{1}{4}''$). Strings intact and clay filling stamped with three seals: (i) circular convex ($\frac{5}{16}'' \times \frac{3}{8}''$) diam., three faces united in one head (one on top of head), that facing L. being bearded; bust (with sceptres ?) indicated; classical type. (ii) head on flat field, of Indian type, R.; hair cut close, marked off by distinct furrows from ear, face obliterated; (iii) same design as on N. xxiv. viii. 71, 72, 76, but only slight impression of upper part. Below seal, two ll. Khar., black but encrusted.

Under-tablet: *Rev.* blank. Hard and well preserved. $9\frac{7}{8}'' \times 2\frac{7}{16}'' \times \frac{3}{8}''$ to $1\frac{1}{4}''$. Pl. XX, XXI.

N. xxiv. viii. 86. Rectang. double tablet, complete. Strings knotted below, prob. opened and re-sealed in

antiquity. Cover $5\frac{1}{4}'' \times 2\frac{1}{8}''$; seal cav. ($1\frac{1}{4}'' \times 1\frac{1}{8}''$) with strings and clay filling. Sq. impression intact. Elephant advances R. with trunk lowered, end curled inwards; outline of back rendered by series of dots. Above head and back are a few strokes apparently meaningless. Summary work. Same design as on N. xxiv. viii. 95. Cov.-tablet: *Obv.* two ll. Khar. above seal.

Under-tablet: *Rev.* blank. Hard and well preserved. $6\frac{7}{8}'' \times 2\frac{1}{8}'' \times 1\frac{1}{8}''$. Pl. XX.

N. xxiv. viii. 87. Rectang. double tablet. Complete; strings tied underneath; probably opened and re-closed in antiquity. Cov.-tablet: *Obv.* seal cav. ($2\frac{3}{8}'' \times 1\frac{5}{16}''$) bearing three seal impressions. Middle impression failed showing only part of border. L. impression same as L. impression (i) on N. xxiv. viii. 85, but not very clear. R. impression same as R. impression (iii) on same (cf. also N. xxiv. 71, 72, 76), but only R. side of seal has taken. Two ll. Khar. very faint and much encrusted with sand on each side of seal. $7\frac{1}{2}'' \times 3'' \times \frac{5}{16}''$ to $\frac{3}{4}''$.

N. xxiv. viii. 88. Rectang. double tablet, opened. Seal cav. ($1\frac{1}{4}'' \times 1''$) empty; string lost. Cov.-tablet: *Obv.* above seal, two ll. Khar.; below seal, two ll. Khar., clear. *Rev.* six ll. Khar., clear.

Under-tablet: *Obv.* six ll. Khar., clear. *Rev.* four ll. Khar. (one almost effaced) running along tablet, to R. end; one l. Khar. (small) running across tablet towards L. end. Good condition. Tablets possibly are not a pair. $6\frac{1}{2}'' \times 2\frac{1}{2}'' \times \frac{1}{4}''$.

N. xxiv. viii. 89. Rectang. double tablet. Complete, unopened. Cov.-tablet: *Obv.* seal cav. ($1\frac{1}{8}'' \times 1''$), seal destroyed. Across one end two ll. Khar.

Under-tablet: *Rev.* blank. $9\frac{1}{4}'' \times 3'' \times \frac{3}{8}''$ to 1.''

N. xxiv. viii. 90. Rectang. double tablet. Opened and loosely re-tied in antiquity. Seal cav. ($1'' \times \frac{7}{8}''$) empty. Cov.-tablet: *Obv.* three ll. Khar. across one end.

Under-tablet: *Rev.* blank. $7\frac{5}{8}'' \times 2\frac{5}{8}'' \times \frac{1}{4}''$ to $\frac{3}{4}''$. Pl. XXIII.

N. xxiv. viii. 91. Rectang. double tablet, unopened, with cover ($5\frac{3}{4}'' \times 2\frac{7}{8}''$). Seal cav. ($2\frac{1}{8}'' \times 1\frac{3}{8}''$) with strings intact. Cov.-tablet: *Obv.* clay seal, two impressions. (i) sq.; within broad border of cross-hatching, stag fallen on fore-knees; (ii) nearly circular; debased design (lotus bud ?), narrow rayed border. Three ll. Khar. to R. of cav., black but somewhat obscured. To L. of cav., one l. Khar.

Under-tablet: *Rev.* two cols. Khar., nine short ll. in first; three in second; much faded and encrusted. Hard and well preserved; much spotted with encrustation. $8'' \times 2\frac{7}{8}'' \times \frac{1}{4}''$ to $\frac{15}{16}''$. Pl. XX.

N. xxiv. viii. 92. Rectang. double tablet. Complete; unopened, but two strings broken. Cov.-tablet: *Obv.* seal cav. ($1'' \times 1\frac{1}{4}''$) with seal bearing same impression as N. xxiv. viii. 82 (?). Only one end has taken. Three ll. Khar. across one end.

Under-tablet: *Rev.* blank. Good condition. $7\frac{3}{4}'' \times 2\frac{1}{4}'' \times \frac{5}{16}$ to $\frac{3}{4}''$.

N. xxiv. viii. 93. Rectang. double tablet. Complete; unopened, but two strings broken. Cov.-tablet: *Obv.* seal cav. ($1\frac{1}{4}''$ sq.) has seal in pink clay, damaged at one edge, with same Chinese impression as N. xxiv. viii. 74 and N. xxxvii. i. 2. Across one end one and a half ll. Khar. faint.

Under-tablet: *Rev.* blank. Wood hard. $9\frac{5}{8}'' \times 3\frac{3}{4}'' \times \frac{9}{16}''$ to $1''$.

N. xxiv. viii. 94. Rectang. double tablet, unopened (cover $9\frac{1}{16}'' \times 3\frac{7}{8}''$). Cov.-tablet: *Obv.* seal cav. ($1\frac{1}{8}'' \times 1\frac{1}{16}''$) with strings intact. Red clay, impression from circular metal intaglio. On R. standing male (?) fig., front; L. hand held free, holds curved bow (?) resting on ground, R. hand free by side; between legs two lines (ends of stole ?); on head, circular nimbus. To L. seated fig. R. on cross-legged chair; wears circular nimbus and close-fitting dress with close folds; R. hand behind by side, L. arm extended and bent vertically at elbow. Rude style. Below seal, one l. Khar., clear; above seal, two ll. encrusted. See *Desert Cathay*, i. Fig. 95, 5. $9'' \times 3\frac{3}{8}'' \times \frac{5}{16}''$ to $\frac{5}{8}''$.

N. xxiv. viii. 95. Rectang. double tablet. Complete; unopened. Cov.-tablet: *Obv.* seal cav. $1\frac{3}{16}''$ sq. Grey clay bearing same device as N. xxiv. viii. 86. Dots along back of elephant (advancing R.) and marks in field faint. Above seal, two ll. Khar., below seal, one l. Khar., faint and sand-encrusted.

Under-tablet: *Rev.* apparently blank. Much sand-encrusted. Good condition. $7\frac{1}{4}'' \times 3\frac{1}{2}'' \times \frac{7}{16}''$ to $1\frac{1}{4}''$.

N. xxiv. viii. 96. Rectang. double tablet. Found opened. Cov.-tablet: *Obv.* seal cav. $1\frac{3}{16}'' \times 1\frac{15}{16}''$; grey clay, two impressions (i) circular; eagle, highly conventionalized; (ii) oval; human fig. wearing circular nimbus, tunic, and stole crossed on breast (?) with streamers to ground. Body front, legs profile, advancing R. R. arm slightly away from side, hand holding knife (?); L. arm raised and bent at elbow, hand holds object like double sack-purse (of Kubera ?). Object, possibly sword, suspended by strap from R. thigh. Debased work showing Roman influence. Above seal, three ll. Khar., below seal, two ll., black and clear. *Rev.* one l. Khar., clear.

Under-tablet: *Obv.* eight ll. Khar., very clear. *Rev.* blank. Cover $5\frac{3}{4}'' \times 3''$; tablet $7\frac{1}{4}'' \times 3'' \times \frac{3}{4}''$ max. Pl. XX, XXIII.

N. xxiv. viii. 001. Fr. of coarse buff fabric, gathered very fully into band of same. Lower edge ragged, prob. torn off large piece. Condition bad. Another gathered piece, $4\frac{1}{2}''$ long, band of which is gone. Also small frs. of loose fabric, salmon and red, and ball ($\frac{3}{4}''$ diam.) of $1''$ to $2''$ frs. of buff thread. Chief fr., length of band $11\frac{1}{2}''$; depth of band $\frac{3}{4}''$; depth of 'frill' $3\frac{3}{8}''$.

N. xxiv. viii. 002. a, b. Two frs. of tanned leather of irregular shape, with bit of leather thong 1′ 6″ long.

N. xxiv. viii. 003. Fr. of rug (*darri*). Satin weave. In bands of pattern, of which the only one completely shown is composed of a diamond in light buff with brown madder

centre dot, on a ground of brown madder, divided from the next repeat by two vertical parallel lines with ends curling away from each other, in buff. Above and below, the brown is bordered by a solid chevron of scarlet, counterchanging with a similar pattern in buff. Beyond this, on one side is a band of some indistinguishable pattern in bright blue and orange. Loosely woven. $6\frac{1}{2}'' \times 2\frac{1}{2}''$.

N. XXIV. viii. 004. Flat strip of wood, like N. XXIV. 006, q. v. Near one end, three triangular nicks are cut in one edge and two in the other (opposite to the two furthest from end). $22\frac{1}{8}'' \times \frac{11}{16}'' \times \frac{1}{4}''$.

N. XXIV. viii. 005. Oblong wooden block. Down middle five holes ($\frac{3}{8}''$ to $\frac{1}{2}''$) are pierced. Across one edge two slanting saw-cuts $\frac{1}{16}''$ deep, marking direction of holes. $7\frac{1}{8}'' \times 1\frac{7}{8}''$ to $1\frac{3}{4}'' \times \frac{5}{8}''$.

N. XXIV. viii. 006. Short wooden stick, with raised central collar $1\frac{3}{16}''$ long; on either side of which has been a belt (? of metal). Peg from some instrument. $3\frac{3}{8}'' \times \frac{7}{16}''$ to $\frac{5}{8}''$ (in middle).

N. XXIV. viii. 007. Wooden stick, slightly thickened towards one end, then tapering down gradually to rounded end. $18'' \times \frac{7}{16}''$ to $\frac{1}{4}''$.

N. XXIV. viii. 008. Wooden stick, like N. XXIV. viii. 007. $14\frac{1}{8}'' \times \frac{3}{8}''$ to $\frac{3}{16}''$.

N. XXIV. viii. 009. Wooden strip like N. XXIV. viii. 62. Edges on one side rounded off. Both ends broken. On one edge two groups of two notches, and opposite them on other edge two groups of four and three notches. $10\frac{3}{4}'' \times \frac{9}{16}'' \times \frac{3}{16}''$.

N. XXIV. viii. 0010. Wooden stick, tapering gradually to each end from its thickest point at one-third of its height. At thinner end a hole. Prob. needle for carpet-work. Cf. N. XXXVIII. i. 001. $10\frac{5}{8}'' \times \frac{3}{8}''$ to $\frac{3}{16}''$.

N. XXIV. viii. 0011. Wooden stick, trimmed round, plain but slightly curved. Sq. hole ($\frac{1}{8}''$ diam., $\frac{13}{16}''$ deep) let into one end. Handle for instrument such as a drill. $9'' \times \frac{3}{8}''$.

N. XXIV. viii. 0012. Wooden peg, with raised central collar. Cf. N. XXIV. viii. 006 and XXXVII. ii. 001. $3\frac{5}{8}'' \times \frac{9}{16}''$ to $\frac{7}{16}''$.

N. XXIV. viii. 0013. Wooden mouse-trap. Spearhead-shaped flat piece of wood, pierced with large hole, $1\frac{1}{2}''$ diam. at widest part. A V-shaped channel traverses almost the whole length. Near hole, six small peg-holes. At upper end, a seventh. In use the large hole is placed over mouse-hole or run. In passing through, the mouse releases check and causes an arrow to be discharged along the V-shaped channel at himself. Cf. N. XIII. iii. 001 and *Anc. Khotan*, ii. Pl. LXXIII, N. XIX. 2. $15\frac{1}{2}'' \times 3\frac{1}{8}''$ to $1\frac{5}{16}'' \times \frac{3}{4}''$.

N. XXIV. viii. 0014. Fr. of buff leather, cut off corner of a rectangular piece. Sides measure $6'' \times 2''$; thickness $\frac{1}{20}''$.

N. XXIV. viii. 0015. Stick of cherry (?) wood, with bark on. One end cut neatly to a wedge. $7\frac{3}{4}'' \times \frac{7}{8}''$.

N. XXIV. ix. 1. Half of oblong tablet. V-shaped notch across long side. *Obv.* two ll. Khar., very clear. *Rev.* blank. $3\frac{7}{8}'' \times 1'' \times \frac{5}{16}''$.

N. XXIV. x. 1. Oblong tablet, with one end wedge-shaped. *Obv.* blank. *Rev.* traces of Khar. inscr. Surface soft and bleached. $11\frac{1}{8}'' \times 1\frac{3}{16}'' \times \frac{5}{16}''$.

N. XXIV. x. 001. Wooden fire-stick (female), like L.A. v. ii. 1. Four holes along each edge of one side. See Joyce, in *Man*, xi. 3, 24, Fig. 6. $4\frac{3}{4}'' \times 1\frac{7}{8}'' \times \frac{7}{8}''$.

OBJECTS FOUND IN RUIN N. XXVI

N. XXVI. i. 1. Rectang. under-tablet. Blank. Wood soft. $14\frac{7}{8}'' \times 4\frac{1}{8}'' \times \frac{1}{2}''$.

N. XXVI. i. 2. Oblong tablet, pierced in one corner. *Obv.* three cols. Khar. of four ll. each (?), and two longer ll. Writing very faint. *Rev.* five cols. Khar. of three or four ll. each. Writing very faint. Soft but well preserved. $8\frac{1}{8}'' \times 1\frac{3}{4}'' \times \frac{5}{16}''$.

N. XXVI. i. 3. Oblong tablet, pierced in one corner; in hole is fr. of folded cloth as tape. *Obv.* one l. Khar., very faint. *Rev.* four (or five ?) ll. Khar. Well preserved but soft. $5\frac{7}{8}'' \times 1\frac{1}{4}'' \times \frac{3}{8}''$ to $\frac{1}{4}''$.

N. XXVI. i. 4. Rectang. cov.-tablet. *Obv.* seal cav. ($1'' \times 1\frac{1}{2}''$) with sq. impression. Round-bodied narrow-necked vase; from its base two long palm-leaves spring outwards and curve up, framing design; from mouth two similar but short leaves curve out and up, with a third (or a flower ?) between them. Stiff poor work. No inscr. *Rev.* four ll. Khar., very faint. Soft and sand-encrusted. $5\frac{1}{2}'' \times 2\frac{3}{4}'' \times \frac{5}{8}''$ to $\frac{1}{8}''$. Pl. XX, XXIII.

N. XXVI. i. 5. Rectang. cov.-tablet, with empty seal cav. ($1\frac{5}{8}'' \times 1\frac{3}{16}''$). *Obv.* blank. *Rev.* two ll. Khar., indistinct. Fairly preserved. $4\frac{7}{8}'' \times 2'' \times \frac{1}{2}''$ to $\frac{3}{4}''$.

N. XXVI. i. 6. Rectang. under-tablet. *Obv.* five ll. Khar., faint. *Rev.* blank. Chipped. Wood rotten. $7\frac{3}{4}'' \times 2\frac{1}{4}'' \times \frac{7}{16}''$.

N. XXVI. i. 7. Oblong tablet with wedge-shaped ends. Hole near one end. Both sides covered with Khar. writing, very faint. Much encrusted with sand and plastered with straw. $12\frac{3}{4}'' \times 2\frac{3}{4}'' \times \frac{1}{4}''$.

N. XXVI. i. 8. Wedge under-tablet. *Obv.* two ll. Khar., very faint. *Rev.* blank. Surface rotten. Point broken. $7\frac{1}{4}'' \times 1\frac{7}{8}'' \times \frac{1}{4}''$.

N. XXVI. i. 001. Bone seal, oblong in section. Pierced. On sq. sides: (i) a lion advancing R.; (ii) a rabbit seated upright, L. On oblong sides: (i) seated monkey L.; (ii) obscure. Deeply but badly cut. $\frac{5}{8}''$ sq. $\times \frac{3}{8}''$. Pl. XXIX.

N. xxvi. ii. 1. Wedge under-tablet. *Obv.* flat surface. Traces of Khar. (?) writing. *Rev.* rounded. Traces of Khar. (?) writing. Much encrusted with sand. $17\frac{3}{4}'' \times 1\frac{7}{8}'' \times \frac{1}{2}''$.

N. xxvi. iii. 1. Wooden double-bracket or cantilever. Hollowed and cut in three for transit. Carved in relief on sides and underneath. *Side i.* Three panels. Centre; from central vase rise twelve long stems, six on each side, curving out and down, ending alternately in pear-shaped fruit covered with saw-tooth pattern, and in broad leaves with incised veins; stems alternately plain and beaded; to R., beaded stem joins leaf; to L., fruit. Side panels each bear similar monster standing in attitude to spring, facing centre. Long neck, long crocodile's jaw with teeth and tongue protruding. Mane rendered by deep V-shaped incisions. Small upright wing curved forward (like that of archaic Corinthian horse). Long back. Long tail brought forward over back. On paws four and five claws. Between panels upright zigzag band. Below panels plain fillet, then moulding with long billets divided by bevelled squares, below which plain fillet. *Side ii.* Central panel; similar design but only five stems on each side of vase. Side panels; similar beasts but without wings, with larger heads and thicker necks. One much damaged. Similar mouldings. *Under-surface.* Centre plain with round hole to take post-head. At one end; within plain border, a broad frame of saw-tooth pattern enclosing plain panel wherein crossed diagonals of bead-work between plain fillets. Cross-row of bead-work. Sq. panel with rude double incised squares at corners; in centre a sunk circle containing twelve-petalled rosette. Then broad cross-band of saw-toothed chip-carving between two rows of inward-pointing dog's-tooth ornament. Cross-row of beads. At the other end; within plain fillet border, cross-band of outward-pointing dog's-tooth ornament. Sunk sq. panel with raised diagonals of bead-work between plain fillets. Then two cross-bands of Vandyke separated by plain band. Then in oblong panel, having bead frame within narrow plain fillet, a flower (lotus) with four double petals and four sepals, twelve stamens in corolla and central boss. Carving coarse chip-work, executed with long driving strokes. $8' \; 3\frac{3}{4}'' \times 8\frac{3}{4}'' \times 14\frac{1}{2}''$. Mortise-hole, diam. $4''$. Pl. XVIII.

N. xxvi. vi. 1. Oblong tablet, each end wedge-shaped. Hole near narrower end. *Obv.* flat. Three ll. Khar., clear. *Rev.* bark mostly left on rounded surface. Two ll. Khar. on bark, faint. $11'' \times 1\frac{5}{8}'' \times \frac{1}{2}''$. Pl. XXVI.

N. xxvi. vi. 2. Oblong tablet. Bark on long edges. Hole at corner. *Obv.* nine ll. Khar. written across, distinct. *Rev.* six ll. Khar. written across, distinct. $4\frac{3}{4}'' \times 1\frac{5}{8}'' \times \frac{1}{4}''$. Pl. XXVII.

N. xxvi. vi. 3. Wedge under-tablet. *Obv.* four ll. Khar. *Rev.* one l. Khar. by sq. end. Good condition, writing clear. $7\frac{5}{8}'' \times 1\frac{9}{16}'' \times \frac{3}{16}''$.

N. xxvi. vi. 4. Oblong tablet. Bark on long edges. *Obv.* three cols. (3, 4, 4 ll.) Khar. *Rev.* blank. Good condition. Beginnings of hole at corner. $5\frac{1}{8}'' \times 1\frac{1}{4}'' \times \frac{3}{8}''$. Pl. XXVI.

N. xxvi. vi. 5. Oblong tablet, pierced near one end. *Obv.* three ll. Khar. and single separate line at bottom; faded, but clear. *Rev.* blank. Well preserved. $3\frac{3}{4}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

N. xxvi. vi. 6. Oblong tablet, with hole near wedge-shaped end. *Obv.* rounded, one l. Khar. *Rev.* flat, four cols. (four ll. each) Khar. Good condition. $8\frac{1}{8}'' \times 1'' \times \frac{3}{8}''$.

N. xxvi. vi. 7. Oblong tablet, with one end roughly pointed, other sq. and pierced. *Obv.* blank. *Rev.* two ll. Khar., faded. Well preserved. $5\frac{3}{16}'' \times 1\frac{5}{16}'' \times \frac{3}{16}''$.

N. xxvi. vi. 8. Oblong tablet, with hole near rounded end. *Obv.* rounded, two wide columns (three ll. each) Khar., and one l. Khar. across rounded end. *Rev.* flat, five cols. Khar. (four of 3 ll., one of 2). Good condition. $6\frac{3}{4}'' \times \frac{15}{16}'' \times \frac{5}{16}''$.

N. xxvi. vi. 9. Oblong tablet, pierced at pointed end. *Obv.* three ll. Khar. *Rev.* one l. Khar. Writing black and clear. Well preserved. $4\frac{3}{4}'' \times \frac{3}{4}'' \times \frac{1}{8}''$.

N. xxvi. vi. 10. Oblong tablet, ends roughly trimmed. *Obv.* three ll. Khar., black but encrusted. *Rev.* one l. Khar., clear. Hard and well preserved. $2\frac{3}{4}'' \times 1\frac{7}{16}'' \times \frac{3}{8}''$. Pl. XXVI.

N. xxvi. vi. 11. Slip-shaped tablet, edges untrimmed. Ends pointed, one pierced. *Obv.* two ll. Khar. *Rev.* blank. Writing faded but clear. Pierced and split; wood hard. $7\frac{3}{8}'' \times \frac{13}{16}'' \times \frac{3}{8}''$.

N. xxvi. vi. 12. Wooden fire-stick, female, like N. xxiv. x. 001. Hole pierced at one end. One fire-hole by one edge, half worn down, and along other edge of same side beginnings of four holes. $4\frac{3}{4}'' \times 1\frac{1}{4}'' \times \frac{7}{8}''$.

N. xxvi. vi. 13. Oblong tablet, with hole at rounded end. On each side two cols. Khar. writing; very faint. Wood hard. $7\frac{3}{16}'' \times 2'' \times \frac{1}{4}''$.

N. xxvi. vi. 14. Wedge-shaped tablet, roughly made, with seal cav. ($1\frac{5}{16}'' \times \frac{7}{8}''$) empty. Blank. Well preserved. $6\frac{3}{4}'' \times 1\frac{5}{16}'' \times \frac{1}{4}''$. Pl. XXVII.

N. xxvi. vi. 15. Slip-shaped tablet. *Obv.* one and a half ll. Khar. lengthways. *Rev.* two ll. Khar. lengthways. $10\frac{1}{8}'' \times 1\frac{1}{8}'' \times \frac{3}{16}''$.

N. xxvi. vi. 16. Label-shaped tablet, pierced near middle. *Obv.* (rounded) three short ll. Khar. arranged columnwise. *Rev.* one l. Khar. Letters dim but legible. Well preserved. $4\frac{1}{2}'' \times \frac{3}{4}'' \times \frac{3}{16}$.

N. xxvi. vi. 17. Label-shaped tablet, formed by splitting piece of branch vertically; one end roughly rounded, other pointed and pierced. *Obv.* rounded, three ll. Khar. much encrusted. *Rev.* six ll. Khar. in two columns. Hard and well preserved. $5\frac{3}{4}'' \times 1'' \times \frac{7}{16}''$.

N. xxvi. vi. 18. Oblong tablet, pierced at one end. *Obv.* three ll. Khar., faded. *Rev.* three ll. Khar., faded. Well preserved. $4\frac{1}{8}'' \times 1\frac{1}{4}'' \times \frac{1}{4}''$.

N. xxvi. vi. 001. Wooden seal-case, empty, cav. ($\frac{13}{16}'' \times \frac{3}{4}''$). Through floor of cav. a round hole pierced. Well preserved. $1\frac{3}{4}'' \times 1\frac{1}{4}''$. Pl. XXVII.

N. xxvi. vi. 002. Wooden knife-handle. Corners rudely rounded. Socket to take blade $1\frac{1}{8}''$ deep, $\frac{5}{8}''$ long $\times \frac{1}{8}''$ wide. $3\frac{3}{8}'' \times 1'' \times \frac{5}{8}''$. Pl. XXXVI.

N. xxvi. vii. 1. Ladle-shaped tablet. Long end whittled down into mere stick; sq. end with empty seal cav. ($1'' \times 1\frac{1}{16}''$); untrimmed on *Rev.* retaining bark. Blank. Well preserved. $9\frac{1}{4}'' \times 1\frac{7}{8}''$ max. Pl. XXVII.

OBJECTS EXCAVATED AT, OR FOUND NEAR, SOUTH-EASTERN GROUP OF RUINS, N. XXVII–XXXV

N. xxvii. 001. Wooden comb, round-topped, like L.A. viii. 001. H. $3\frac{3}{8}''$; length of teeth $1\frac{3}{16}''$; width $3\frac{1}{16}''$; thickness $\frac{3}{8}''$. Pl. XXVIII.

N. xxvii. i. 001. Rectang. cov.-tablet. Bleached; no writing. Good condition. $5\frac{1}{4}'' \times 2''$ to $1\frac{5}{8}'' \times \frac{3}{4}''$ to $\frac{1}{8}''$.

N. xxix. 001. a–d. Fabric frs. a. Fr. of ingrain material. Warp of thin brown thread. Weft, white, blue, and crimson. Pattern: a variety of chequer, forming stepped lozenges, blue with red square in centres, divided by stepped chevron bands of blue. Evenly woven. Colour fresh. White discoloured to yellow in places. $9\frac{1}{4}'' \times 3''$. Pl. XLIX. With this, **b.** piece of bright pink twisted cord, colour very fresh, but strongest on surface. Length $2\frac{7}{8}''$. Also **c.** fr. of dark red fabric, loose texture. Length $5''$. And **d.** part of flat string band of goat's hair, as L.B. iii. 004. This example is of three strings (buff in middle, with dark brown on each side), sewn together with buff twine which passes horizontally through the three and appears in alternate stitches on outer edges. Fr. of fourth string at end. *C.* $13'' \times \frac{3}{4}''$.

N. xxix. 002. Oval piece of wood, flat, pointed roughly at either end. Face quite flat, back rounded and with two projecting ends of (broken) loop handle. Builder's float for plastering wall faces. $7\frac{7}{8}'' \times 3\frac{1}{4}'' \times \frac{1}{2}''$ to $\frac{3}{8}''$. Pl. XIX.

N. xxix. 003. Part of broom of dried grass, tied round with a flat cord of plaited goat's (?)-hair. Length *c.* $6''$.

N. xxix. 004. Flat bronze disc, with nicked edge. In centre repoussé boss, broken. Between each nick on edge a small repoussé boss. Diam. $1\frac{1}{2}''$; diam. of boss $\frac{3}{8}''$. Pl. XXIX.

N. xxix. 005. Pendant in blue paste, in shape of urn, resembling closely products of Roman Egypt both in material and in form. H. $1\frac{1}{4}''$; diam. $\frac{7}{16}''$. Pl. XXIX.

N. xxix. 006. Bronze ring, with flat bezel bearing intaglio. Closed eye. Diam. $\frac{5}{8}'' \times \frac{13}{16}''$; bezel $\frac{3}{4}'' \times \frac{13}{16}''$. Pl. XXIX.

N. xxix. 007. Fr. of bead of blue paste, large cylindrical. Channelled edge. Cf. *Anc. Khotan*, ii. Pl. LXXIV, N. 005. b. Regular Western type. Thickness $\frac{1}{2}''$; diam. was *c.* $\frac{3}{4}''$. Pl. XXIX.

N. xxix. i. 1. Rectang. under-tablet. One edge split off. No writing. Wood hard. $9\frac{5}{8}'' \times 2\frac{1}{8}'' \times \frac{7}{16}''$.

N. xxix. i. 2. Wedge under-tablet. *Obv.* seven ll. Khar. mostly distinct. *Rev.* one l. Khar. at sq. end, faint. Well preserved. $9'' \times 2'' \times \frac{1}{4}''$. Pl. XXVII.

N. xxix. i. 3. Rectang. under-tablet, lower edge broken away. *Obv.* five ll. Khar., and upper half of characters of sixth. *Rev.* blank. Good condition. $10\frac{5}{8}'' \times 2\frac{3}{4}''$ (incomplete) $\times \frac{1}{4}''$.

N. xxix. i. 4. Rectang. cov.-tablet, with empty seal cav. ($1\frac{3}{4}'' \times 1\frac{3}{16}''$). *Obv.* one l. Khar. on one side. *Rev.* blank. Well preserved. $5\frac{5}{8}'' \times 3\frac{1}{8}'' \times \frac{1}{16}''$ to $\frac{1}{2}''$.

N. xxix. i. 5. Fr. of rectang. under-tablet. One end lost. *Obv.* four ll. Khar., clear. *Rev.* blank. Save for breakage, well preserved. $8\frac{1}{4}'' \times 1\frac{1}{2}'' \times \frac{1}{8}''$ to $\frac{3}{8}''$.

N. xxix. i. 6. Rectang. under-tablet. One edge split away. *Obv.* four and a half ll. Khar., black and clear. Gash cut in lower edge. *Rev.* blank. $7\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{3}{16}''$.

N. xxix. i. 7. Wedge cov.-tablet, with seal-cav. ($1\frac{3}{16}'' \times 1\frac{3}{16}''$) empty. *Obv.* one short l. Khar. at sq. end; trace of usual character near point. *Rev.* one l. Khar. in corner by sq. end. Well preserved. $9'' \times 1\frac{3}{4}'' \times \frac{3}{16}$.

N. xxix. i. 8. Oblong tablet, pierced in one corner. *Obv.* nine short ll. Khar. written across narrower dimension; faded but fairly distinct. *Rev.* five ll. Khar., faded. Good condition. $3\frac{11}{16}'' \times 1\frac{11}{16}'' \times \frac{3}{8}''$.

N. xxix. i. 9. Oblong tablet, pierced one corner. *Obv.* two cols. Khar., of five and three ll., clear. *Rev.* blank. Hard; split in places. $5\frac{3}{4}'' \times 2\frac{1}{16}'' \times \frac{1}{4}''$.

N. xxix. i. 10. Wedge cov.-tablet. Notch cut either side close to point. *Obv.* seal cav. ($1\frac{1}{8}'' \times 1\frac{1}{2}''$) $1\frac{3}{4}''$ from sq. end. By sq. end one l. Khar. Usual char. by hole. *Rev.* two ll. Khar. $10\frac{1}{8}'' \times 2'' \times \frac{5}{8}''$ to $\frac{1}{8}''$.

N. xxix. i. 11. Wedge under-tablet. *Obv.* four ll. Khar. *Rev.* one l. Khar. near sq. end, and one l. Khar. in middle. Good condition. $9\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

N. xxix. i. 12. Oblong tablet, with hole in corner. *Obv.* blank. *Rev.* seven ll. Khar., faint (five are only $1''$ long). Well preserved. $5\frac{1}{4}'' \times 2\frac{1}{2}'' \times \frac{3}{8}''$.

N. xxix. i. 13. Wedge under-tablet. Two holes by point. *Obv.* four ll. Khar., clear. *Rev.* one l. Khar. by sq. end, very faint. Good condition. $8\frac{3}{4}'' \times 1\frac{3}{4}'' \times \frac{5}{16}''$.

N. xxix. i. 14. Rectang. tablet. Notches for string in middle of each edge, and sides bevelled in between. No seal cav. *Obv.* two ll. Khar., faint but clear, in R. upper corner and off L. upper side resp. *Rev.* eight ll. Khar.,

clear. Condition very fair. *Obv.* surface sand-encrusted, and one corner worn away. 4$\frac{7}{8}$" × 3$\frac{1}{4}$" × $\frac{1}{4}$".

N. xxix. i. 15. Rectang. under-tablet. *Obv.* seven ll. Khar., indistinct. *Rev.* blank. Hard, but worn. 7$\frac{1}{16}$" × 2$\frac{3}{16}$" × $\frac{1}{4}$".

N. xxix. i. 16. Rectang. cov.-tablet, with seal cav. (1$\frac{1}{8}$" × 1$\frac{1}{8}$") empty. *Obv.* on one side of cav., one l. Khar., faint. *Rev.* six ll. Khar., clear. Excellently preserved. 6$\frac{3}{8}$" × 3$\frac{5}{8}$" × $\frac{1}{8}$" to $\frac{5}{8}$".

N. xxix. ii. 1. Oblong tablet, pierced at one end. Blank. Good condition. 6$\frac{3}{8}$ × 1$\frac{5}{16}$" × $\frac{1}{4}$".

N. xxix. ii. 2. Oblong tablet, pierced in one corner. Blank. Fairly preserved. 5" × 1$\frac{1}{8}$".

N. xxix. ii. 3. a, b. Double-wedge tablet, complete, opened. Seal cav. (1$\frac{1}{16}$ × 1$\frac{1}{4}$") empty. Cov.-tablet : *Obv.* one l. Khar. at sq. end, one l. point side of cav., trace of usual character near point. *Rev.* blank.

Under-tablet: *Obv.* three ll. Khar., faint and encrusted. *Rev.* blank. Hard and well preserved. 15$\frac{1}{8}$" × 2$\frac{3}{8}$" × $\frac{3}{8}$" to 1$\frac{3}{8}$".

N. xxix. ii. 001. a. Wooden fire-stick (female), like L.A. v. ii. 1. Corners rudely bevelled. At one end a hole pierced right through. Seven fire-holes along one side and the beginnings of one on the other side. This was passed through ring of goat's-hair rope belonging to N. xxix. ii. 001. b. See Joyce in *Man*, xi. 3, 24, Fig. 1. 6$\frac{1}{4}$" × 1$\frac{1}{8}$" × *c.* 1" Pl. XXVIII.

N. xxix. ii. 001. b. Stick warped into a V. At each end a wide notch, in one of which a piece of goat's(?)-hair rope is attached by the usual method of separating the strands. When found, the fire-block N. xxix. ii. 001. a. was passed through a loop in the rope. Possibly handle for thong of fire-drill, but more probably a 'dead-eye' or primitive pulley for hauling rope. Cf. N. xxiv. 002. H. of bow 2$\frac{1}{2}$"; diam. stick $\frac{1}{2}$" to $\frac{3}{4}$"; across ends 2$\frac{3}{4}$". Pl. XXVIII.

N. xxix. iv. 1. Wedge cov.-tablet. *Obv.* 1$\frac{5}{16}$" from sq. end seal cav. (1$\frac{5}{16}$" × 1$\frac{1}{16}$") with remains of seal. Point side of seal, Svastika is cut. No writing visible. *Rev.* blank. Bad condition. 8$\frac{3}{4}$" × 1$\frac{3}{8}$ × $\frac{3}{8}$".

N. xxix. iv. 2. Rectang. under-tablet; with hole in L. top corner. *Obv.* twelve ll. Khar., black and very clear, except in extreme R. top corner. *Rev.* blank. Good condition. 15$\frac{3}{8}$" × 4$\frac{3}{4}$" × $\frac{3}{8}$".

N. xxx. i. 1. Wedge under-tablet. *Obv.* three ll. Khar. *Rev.* one l. Khar. by sq. end, and scratched Svastika 3$\frac{1}{2}$" from point. Condition good. 14$\frac{1}{2}$" × 2$\frac{3}{4}$" × $\frac{3}{16}$".

N. xxx. ii. 1. Wedge under-tablet. Wood perished and bleached. (Broken and glued.) 14" × 2$\frac{1}{2}$" × $\frac{3}{16}$".

N. xxx–xxxii. 001. Bronze ring, with flat bezel. Incised design. Diam. $\frac{13}{16}$" × $\frac{3}{4}$". Pl. XXIX.

N. xxx–xxxii. 002. Steatite handle, sq. in section, of some implement. Pierced, and flattened at end. Broken. 1$\frac{3}{8}$" long × $\frac{1}{4}$" sq., and $\frac{3}{8}$" × $\frac{1}{8}$" (at end). Pl. XXIX.

N. xxx–xxxii. 003. Blue glass bead, faceted lentoid. Threaded with bronze wire. $\frac{3}{8}$" × $\frac{3}{16}$" sq. to $\frac{1}{8}$" sq.

N. xxx–xxxii. 004. Pyramidal lignite seal, pierced through apex. On base intaglio face L., roughly cut. $\frac{9}{16}$" sq.; $\frac{3}{8}$" high. Pl. XXIX.

N. xxxv. 001. Wooden comb, round-topped like L. A. viii. 001. H. 2$\frac{1}{2}$"; length of teeth $\frac{3}{4}$"; width 2$\frac{5}{8}$"; thickness $\frac{5}{16}$"; seven teeth to 1".

N. xxxv. 002. Flat piece of wood. One end sq., the other narrower end wedge-shaped. By this end chip off one side. Near end two parallel saw-cuts, $\frac{1}{16}$" deep, $\frac{3}{16}$" apart. Nearer broad end a hole $\frac{3}{16}$" diam. 5$\frac{5}{8}$" × 1$\frac{7}{8}$" × $\frac{1}{4}$".

N. xxxv. 003. Bronze ring. Lozenge-shaped section. Ends beaten together. Diam. $\frac{7}{16}$".

N. xxxv. 004. Round bronze button, with boss projecting from within a raised ring on the face. Behind, two hoops. Face $\frac{13}{16}$" × $\frac{3}{4}$"; diam. hoops $\frac{5}{16}$"; thickness hoops $\frac{3}{16}$". Pl. XXIX.

N. xxxv. 005. Curved bronze rod, sq. in section. One end beaten out flat, other end broken. Rod *c.* $\frac{3}{4}$" × $\frac{1}{16}$" × $\frac{1}{12}$"; flat part 1" × $\frac{1}{4}$" × $\frac{1}{32}$".

N. xxxv. 006. Pendant of glass and silver. Round convex piece of pale green glass, set in round silver mounting. Flat back. Round edge, row of hollow silver bulbs. Two small rings on back to take a rod, and a loop for suspension. Diam. $\frac{11}{16}$"; diam. of glass $\frac{7}{16}$". Pl. XXIX.

N. xxxv. i. 1. a, b. Double-wedge tablet, complete. Cov.-tablet: *Obv.* 2$\frac{1}{4}$" from sq. end seal cav. (1$\frac{5}{8}$" × 1$\frac{7}{16}$") empty. By sq. end one l. Khar. By point usual character. *Rev.* blank.

Under-tablet: *Obv.* four ll. Khar. *Rev.* one l. Khar. at sq. end. Wood hard but twisted. 14" × 2$\frac{3}{4}$" × $\frac{13}{16}$" to $\frac{3}{16}$".

OBJECTS EXCAVATED AT SOUTHERN GROUP OF RUINS, N. XXXVII–XLI

N. xxxvii. i. 1. Oblong tablet, much encrusted with sand and plastered with straw. *Obv.* traces of Khar. writing. *Rev.* three ll. Khar., faint and obscured. 18$\frac{1}{4}$" × 1$\frac{3}{4}$" × $\frac{1}{4}$".

N. xxxvii. i. 2. Rectang. cov.-tablet. *Obv.* seal cav. (1$\frac{1}{8}$" × 1$\frac{1}{16}$") with damaged seal of pink clay bearing same Chinese impression as N. xxiv. viii. 74 and 93. Across end two ll. Khar. faint. *Rev.* three ll. Khar., faint, upper line almost effaced. Wood hard. 4$\frac{7}{8}$" × 3$\frac{1}{4}$" × 1$\frac{1}{8}$" to $\frac{3}{16}$". Pl. XXIII.

N. xxxvii. i. 3. Wedge cov.-tablet. *Obv.* 2$\frac{1}{4}$" from sq. end seal cav. (1$\frac{9}{16}$" × 1$\frac{1}{4}$") with remains of seal. No writing. *Rev.* one l. Khar., faint. Surface soft. 15$\frac{1}{2}$" × 2$\frac{1}{2}$".

N. xxxvii. i. 3. a. Fr. of wedge cov.-tablet, L. end.

No traces of writing. Very soft and poorly preserved. $6\frac{1}{2}'' \times 2''$.

N. xxxvii. i. 4. Oblong tablet, pierced at wedge-shaped end. *Obv.* four ll. Khar., faint. *Rev.* blank. $4\frac{1}{8}'' \times 1\frac{1}{8}''$.

N. xxxvii. i. 5. Wedge under-tablet. *Obv.* three ll. Khar., faded. *Rev.* blank. Hard but warped. $9'' \times 1\frac{5}{8}''$.

N. xxxvii. ii. 001. Wooden peg, with raised collar round middle. Cf. N. xxiv. viii. 006. Used in sheep-shearing implement? $3\frac{1}{2}'' \times \frac{3}{8}''$ to $\frac{9}{16}''$ (in raised central part).

N. xxxvii. ii. 002. Fr. of warped stick with notched ends like N. xxix. ii. 001. b. One end broken off. Handle of fire-drill or 'dead-eye'. H. of bow $1\frac{1}{2}''$; thickness $\frac{1}{2}''$ to $\frac{1}{4}''$.

N. xxxvii. ii. 003. Wedge cov.-tablet, with seal cav. ($1\frac{5}{8}'' \times 1\frac{1}{8}''$) empty. (One side of cav. repaired as boring near lower edge shows.) Blank. Wood bleached, cracked, and warped, but hard. $9\frac{5}{8}'' \times 2\frac{1}{8}''$.

N. xxxvii. ii. 004. Fr. of wooden furniture, roughly carved. Both ends appear to be finished, though one has curved edge and the other straight. One side complete, but other, in spite of edge worn smooth, looks as if part had been split off. Pattern consists of three bands, $3''$ broad, bearing a circle, within which a four-petalled flower, alternating with three bands, *c.* $4\frac{1}{2}''$ broad, of curved lines concave towards finished side. These are cut at middle by a plain band $1''$ wide. Near finished side three dowel-holes, one with dowel. Band with circle next to curved end, band with curves next to straight end (broken in two pieces). $23\frac{1}{2}'' \times 2\frac{7}{8}''$ to $2'' \times \frac{5}{8}''$. Pl. XIX.

N. xxxvii. iii. 1. Wedge cov.-tablet, with seal cav. ($1\frac{1}{4}'' \times 1\frac{1}{4}''$) empty. *Obv.* to R. of cav. two ll. Khar., to L. three ll. Khar. *Rev.* five ll. Khar. Writing faint, and on *Obv.* indistinct. Good condition. $5\frac{3}{8}'' \times 2''$.

N. xxxvii. iii. 2. Rectang. cov.-tablet, with seal cav., ($1\frac{1}{4}'' \times 1\frac{1}{2}''$, one side broken), empty. *Obv.* blank. *Rev.* two ll. Khar., very faint. Hard but bleached. $7\frac{11}{16}'' \times 2\frac{9}{16}''$.

N. xxxviii. 001. Sample of Jigda wood, with bark. $22'' \times 1\frac{1}{8}''$.

N. xxxviii. 002. Split log of apricot (?) wood. Hard. Partly insect-eaten. No bark. $16'' \times 3\frac{1}{4}'' \times 1\frac{3}{4}''$.

N. xxxviii. i. 001. Wooden needle, like N. xxiv. viii. 0010. Hole through end furthest removed from thickest point. $9\frac{3}{4}'' \times \frac{3}{8}''$ to $\frac{3}{16}''$. Pl. XXVIII.

N. xxxix. 001. a, b. Two sticks from the same kind of tree (willow, *suget*?). **a.** $3'\ \frac{3}{4}'' \times \frac{3}{4}''$ to $\frac{3}{8}''$; **b.** $2'\ 9\frac{1}{2}'' \times c.\ 1''$.

N. xxxix. 002. Rectang. cov.-tablet, unfinished. Three sawn string grooves, but no seal cavity. Hard. $6'' \times 3\frac{3}{8}'' \times 1''$ to $\frac{7}{16}''$.

N. xli. 1. Rectang. double tablet, complete; opened. Seal cav. ($1'' \times 1''$) empty. Cov.-tablet: *Obv.* three ll. Khar. to R. of seal cav. *Rev.* five ll. Khar.

Under-tablet: *Obv.* five ll. Khar. *Rev.* blank. Writing throughout black and clear. Hard and excellently preserved. $5\frac{3}{4}'' \times 2\frac{1}{4}''$. Pl. XXIII.

N. xli. 2. Takhtī-shaped tablet, with pierced diamond handle. *Obv.* three ll. Khar., clear. *Rev.* blank. Hard and well preserved. $4\frac{3}{4}'' \times 1\frac{3}{8}''$. Pl. XXIII.

N. xli. 3. Rectang. under-tablet. *Obv.* eight ll. Khar. clear. *Rev.* blank. Good condition. $6\frac{1}{4}'' \times 2\frac{5}{8}''$.

N. xli. 4. Bronze rod, sq. in section; tapering. $3\frac{1}{8}'' \times \frac{1}{12}''$ to $\frac{1}{24}''$ sq.

N. xli. 5. Bronze spoon, handle and top of bowl. Handle $6'' \times \frac{1}{8}'' \times \frac{1}{16}''$; bowl $\frac{7}{16}''$ (as far as break), $\frac{7}{8}''$ wide; and *c.* $\frac{1}{100}''$ thick. Pl. XXXVI.

N. xli. 001. Rectang. cov.-tablet, with empty seal cav. ($1\frac{1}{4}'' \times 1\frac{3}{16}''$). *Obv.* blank. *Rev.* traces of three ll. Khar., very fragmentary. Warped and bleached. $4\frac{5}{8}'' \times 2\frac{1}{4}''$.

N. xli. 002. Bundle of rags of buff and red fabrics, sewn together in places, and buff felt, with frs. of dark brown string. Fabrics very dirty.

N. xli. 003. Part of wooden comb, round-topped, fine-toothed; like L.A. viii. 001. H. $2\frac{3}{4}''$; length of teeth $1\frac{1}{8}''$; width (actual) $2\frac{3}{8}''$ (complete *c.* $3''$); thickness $\frac{3}{8}''$; 29 teeth to $1''$.

N. xli. 004. Part of hollowed-out gourd, bell-shaped, perhaps used as inkpot. H. $1\frac{1}{2}''$; across mouth $2\frac{3}{4}''$.

N. xli. 005. Long rounded stick, tapering gradually to one end, and quickly to the other. Rounded ends slightly charred. Prob. fire-drill. $23\frac{1}{2}'' \times \frac{9}{16}''$ to $\frac{5}{16}''$.

N. xli. 006. Piece of curved horn, hollow, the two ends rounded off. Similar to N. xxiii. ii. 005. $4\frac{1}{2}'' \times 1\frac{1}{8}'' \times c.\ \frac{1}{4}''$.

N. xli. 007. Wooden object, with blade, on one side slightly hollowed. Resembling kitchen ladle, or a winnowing-fan (?). Length $23\frac{1}{2}''$; blade $2\frac{1}{2}''$ wide $\times \frac{1}{2}''$ thick; handle $1''$ wide $\times \frac{5}{8}''$ thick.

N. xli. 008. Wooden stick, sq. in section, with short narrow rounded point; perhaps pen. Length $10\frac{1}{4}''$ (point $1\frac{1}{4}''$); diam. $\frac{5}{16}''$ sq. (point $\frac{1}{8}''$).

MISCELLANEOUS OBJECTS FOUND AT NIYA SITE

N. 002. Part of wooden bowl. Five irregular holes. Inside, a piece of thin and very rotten grey felt. A sieve. H. $2\frac{1}{2}''$; Gr. M. $4\frac{1}{2}''$; thickness $\frac{3}{8}''$.

N. 004. Oblong tablet, pierced at rounded end. *Obv.* five cols. Khar. of three short ll. each, and one of two ll. below; writing indistinct. *Rev.* three cols. of 2, 2 (?), and 3 ll. Khar. Central and part of L. column gnawed by mice (?). Hard and well preserved. Received Oct. 15, 1906. $7\frac{3}{8}'' \times 1\frac{7}{8}''$.

N. 005. Wooden buckle, consisting of sq. head with oblong central hole through which a strap passed from above, and a long tongue-shaped piece, at the lower end of which is a groove and hinge-hole for a tongue (pointing downwards); transversely across the tongue-groove is a rectangular slit through which a strap passed from behind and was held by the tongue. Probably the breast-piece of harness of riding-horse. Upper surface is rounded, lower flat but worn by friction. $5\frac{7}{8}'' \times 1\frac{5}{8}'' \times \frac{1}{2}''$. Pl. XXVIII.

N. 006. Wooden spindle whorl. H. $\frac{3}{4}''$; hole $\frac{7}{16}''$ diam.; diam. 2".

N. 007. Thick rope of corn-stalks, wound in circle. Perhaps for wearing on head when carrying burden. Ends have come apart. Diam. $8'' \times 8\frac{1}{2}''$.

N. 008. Broad piece of matting, very flat split rush. Cf. T. XII. 0024. ·10" × $9\frac{1}{2}''$.

N. 009. Holdfast of flat bronze, folded over into a loop at head; shaft double. Loop wider than rest. $\frac{7}{8}'' \times \frac{1}{10}''$ to $\frac{1}{5}'' \times \frac{1}{32}''$.

N. 0010. Bronze bell of 'grelot' type. Suspension ring broken, and clapper gone. Cf. *Anc. Khotan*, ii. Pl. LXXIV, N. 0012. a. Diam. $\frac{5}{8}'' \times \frac{3}{8}''$. Pl. XXIX.

N. 0011. White pebble, pierced for bead. Water-worn, and two sides flattened to make it a rude cylinder. Diam. $\frac{1}{2}''$.

N. 0012. Bronze ring, with broad flat bezel. Intaglio design worn and indistinct. Cf. *Anc. Khotan*, ii. Pl. LI, D.K. 004; Pl. LII, N. 0014. g. Diam. of ring $\frac{5}{8}''$; bezel $\frac{1}{2}'' \times \frac{9}{16}''$. Pl. XXIX.

N. 0013. Small strip of plate bronze. Round one end, sq. the other. Hole at each end. $\frac{11}{16}'' \times \frac{1}{4}''$. Pl. XXIX.

N. 0014. Cowrie shell, pierced for suspension. Found about SE. group of ruins. Length $\frac{5}{8}''$.

N. 0015. Lignite seal (found about SE. group of ruins). Two sq., four oblong sides. Pierced with $\frac{3}{16}''$ hole. Scratches on oblong sides; on one sq. side rectilinear quartering, on other apparently four Chinese Seal characters, undetermined. $\frac{1}{2}''$ sq. × $\frac{3}{8}''$. Pl. XXIX.

N. 0016. Fr. of turquoise matrix, found at NW. group. $1\frac{1}{3}'' \times 1''$.

N. 0017. Bronze nail, sq. in section with octagonal flat head. Head $\frac{3}{4}'' \times \frac{5}{8}'' \times \frac{1}{8}''$; length $\frac{5}{8}''$.

N. 0018. Bead of blue glass, small cylindrical, found at NW. group. $\frac{3}{16}''$ long; $\frac{1}{4}''$ diam.

N. 0019. Lentoid bead, of opaque white stone, found at NW. group. $\frac{5}{8}'' \times \frac{5}{16}''$ to $\frac{3}{16}''$.

N. 0020. Sq. bronze seal. Much split with corrosion. $\frac{9}{16}'' \times \frac{1}{4}''$. Handle broken. Pl. XXIX.

N. 0021. Spherical cornelian bead. Diam. $\frac{3}{16}$.

N. 0022. Octagonal bronze ring. Flat one side, edges bevelled the other. Inside diam. $\frac{3}{16}''$; thickness $\frac{1}{12}'' \times \frac{1}{16}''$.

N. 0023. Fr. of bronze orn. Curved strip orn. with two punched circles. Undulating edge. Gr. M. $\frac{7}{16}''$; Gr. width $\frac{3}{16}''$.

N. 0024. Round bronze wire, short curved piece of, with button end. Gr. M. $\frac{5}{16}''$; diam. $\frac{3}{32}''$; diam. button $\frac{1}{8}''$.

N. 0025. Wedge under-tablet; a large piece has been split off surface and sq. end. *Obv.* end of two ll. Khar. visible near point. *Rev.* blank. Excellent preservation. Received on Oct. 15, 1906. $9\frac{1}{8}'' \times 1\frac{1}{2}''$.

N. 0026. Rectang. double tablet. Complete; opened. Cov.-tablet: *Obv.* seal cav. $(1\frac{3}{16} \times 1'')$, one side broken away. Seal defaced. Across one end two ll. Khar. very faint. *Rev.* four ll. Khar.

Under-tablet: *Obv.* five ll. Khar., faint. *Rev.* blank. $3\frac{11}{16}'' \times 1\frac{1}{2}'' \times \frac{5}{16}''$.

N. 0030. Jigda stick, hard but much split. No bark. $23'' \times 1\frac{1}{4}''$.

N. 0031. Mulberry wood stick (*ujme*), hard but much split. No bark. $21\frac{3}{4}'' \times 1\frac{5}{8}''$.

N. 0036. Bronze ring, with flat bezel whereon roughly incised linear design. Hoop broken. (Found by Ibrāhīm, SE. group.) Diam. $\frac{7}{8}''$. Pl. XXIX.

TABLETS BROUGHT BY IBRĀHĪM AS FINDS MAINLY FROM N. XXVIII

N. Ibr. 1. Oblong tablet, pierced at wedge-shaped end. *Obv.* (rounded) traces of three ll. Khar. *Rev.* blank. Surface destroyed. $5'' \times 1''$.

N. Ibr. 001. Rectang. double tablet, complete; opened. Said to have been found by Ibrāhīm in 1904 at N. XIV. Seal cav. $(1\frac{13}{16}'' \times 1\frac{5}{16}'')$ empty. Cov.-tablet: *Obv.* blank. *Rev.* four ll. Khar., rubbed in parts.

Under-tablet: *Obv.* nine ll. Khar., clear, save where rubbed. *Rev.* blank. Well preserved. $7\frac{7}{8}'' \times 2\frac{13}{16}''$.

N. Ibr. 002. Oblong tablet, with slightly curved ends, one pierced; corner by hole neatly cut out. *Obv.* four ll. Khar., barely traceable. *Rev.* blank. Fairly hard, but bleached. $4'' \times 1\frac{7}{8}'' \times c.\ \frac{1}{4}''$.

N. Ibr. 003+008. Rectang. double tablet. Cov.-tablet: Empty seal cav. $1\frac{1}{8}'' \times \frac{3}{4}''$. *Obv.* blank. *Rev.* six ll. Khar., clear. Badly warped and discoloured.

Under-tablet: *Obv.* seven ll. Khar., clear except at ends. *Rev.* blank. $9\frac{1}{4}'' \times 2\frac{3}{4}''$.

N. Ibr. 004. Wedge under-tablet. *Obv.* traces of four ll. Khar., very faint. *Rev.* blank. Much corroded. $8\frac{1}{2}'' \times 1\frac{7}{8}'' \times \frac{1}{4}''$.

N. Ibr. 005. a, b. Rectang. double tablet, complete;

opened. Seal cav. ($1\frac{3}{16}'' \times \frac{3}{4}''$) empty. Cov.-tablet: Blank.

Under-tablet: *Obv.* eight ll. Khar., much rubbed. Warped, and one corner and end wholly destroyed, together with part of inscr. $8'' \times 2\frac{1}{2}''$. Pl. XXVI.

N. Ibr. 006. Rectang. cov.-tablet, with seal cav. ($1\frac{7}{16}''$ wide, lower part lost) empty. *Obv.* one l. Khar., on each side of seal cav. *Rev.* Faint traces of two ll. Khar. Wood soft, cracked, and peeling. $5\frac{1}{2}'' \times 2''$.

N. Ibr. 007. Rectang. cov.-tablet, with empty seal cav. ($\frac{7}{8}'' \times \frac{3}{4}''$). *Obv.* blank. *Rev.* two ll. Khar., very faint. Warped and bleached. $4\frac{7}{8}'' \times 2\frac{1}{4}''$.

N. Ibr. 009. Oblong tablet. Hole in corner. No writing discernible. Warped; cf. N. Ibr. 002. $5\frac{5}{8}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

N. Ibr. 0010. Oblong tablet. Hole in corner. Warped; no writing. $4\frac{3}{4}'' \times 1\frac{1}{4}'' \times \frac{1}{4}''$.

N. Ibr. 0011. Rectang. cov.-tablet. No writing visible. Much warped, but hard. $4\frac{3}{4}'' \times 3'' \times \frac{3}{4}''$ to $\frac{3}{16}''$.

N. Ibr. 0012. Bronze ring, with flat bezel with incised design of crossed lines, within an oval. Very good condition, but broken in two places. Cf. *Anc. Khotan*, ii. Pl. LII, N. 0014. g. Inside diam. $\frac{7}{8}''$; bezel $\frac{3}{4}'' \times \frac{1}{8}''$.

N. Ibr. 0013. Rectang. cov.-tablet, with seal cav. ($1\frac{1}{2}'' \times 1\frac{3}{16}''$) empty. Blank. Wood bleached and slightly cracked. $4\frac{3}{4}'' \times 1\frac{1}{2}'' \times \frac{5}{16}''$ to $\frac{13}{16}''$.

N. Ibr. 0014. Wedge cov.-tablet, with empty seal cavity $1\frac{9}{16}'' \times 1\frac{1}{4}''$. Bleached. Excellent condition. $7\frac{11}{16}'' \times 1\frac{1}{2}'' \times \frac{1}{4}''$ to $\frac{11}{16}''$.

N. Ibr. 0015. Sq. bronze seal, with shank at back in form of four-footed beast, very broad and low, standing with head turned L. No detail. On face, single Chinese char. in contracted Seal writing, not determined. Said to have been found by Ibrāhīm about 1904 near NW. group, Niya Site. Face *c.* $\frac{1}{2}''$ sq.; H. $\frac{13}{16}''$. Pl. XXIX.

N. Ibr. 0016. Slip-like tablet, made of round stick split in half. Notch near one end. *Obv.* round, blank. *Rev.* flat, two ll. Khar., faint. Wood hard. $9\frac{3}{4}'' \times \frac{7}{8} \times \frac{3}{8}''$. Pl. XXVII.

CHAPTER VII

ANCIENT SITES OF ENDERE

SECTION I.—THE RUINS OF BILĒL-KONGHAN

AFTER a day's halt at Imām Ja'far Sādiq, made necessary by a variety of urgent practical tasks, I started on the morning of November 1, 1906, across the high sands eastwards in order to revisit the tract near the end of the Endere River before moving on to Charchan. In 1901 I had explored there the ruins of an old fort, half buried under drift sand, and a Stūpa. Want of time had then prevented a thorough survey of the whole site. The existence of other remains was indicated by various evidence, and my archaeological conscience would not have allowed me to forgo a fresh visit, even if the shortest route to Charchan and Lop-nōr had not led quite near. But a particular inducement was supplied by a curious acquisition which I made during my stay at the Niya Site.

Sadak's tablet from Endere.

On hearing of my intended move to Endere, Sadak, the young cultivator from the Mazār, whose guidance had proved useful already on my first return to that site, told me of an inscribed 'Takhta' he had come upon a year or two before, while 'searching for treasure' close to the old fort of Endere. When on my arrival at the shrine he brought it for my inspection, I was greatly surprised to find that it was an irregular oblong tablet fairly well preserved and showing clear Kharoṣṭhī writing on both sides.[1] The writing proved that it belonged approximately to the same period as the wooden documents of the Niya Site. Yet my own finds made in the old fort of Endere in 1901 had established the fact that this ruin had been occupied at the beginning of the eighth century and had probably been abandoned to the desert soon after. Thus an interval of not less than four centuries seemed to separate the remains explored by me in 1901 from the document now put before me by Sadak. I was at first inclined to suspect in the latter a find clandestinely brought away from the Niya ruins. But Sadak, as well as his father Samsak, a withered old shepherd of the Mazār flocks, clung stoutly to the story first given, in spite of all my critical questionings. Assuming their statement to be true, there was here an interesting archaeological puzzle which could only be solved on the spot. Its solution, as I shall soon be able to show, had a wide historical bearing.

March to Yār-tungaz River end.

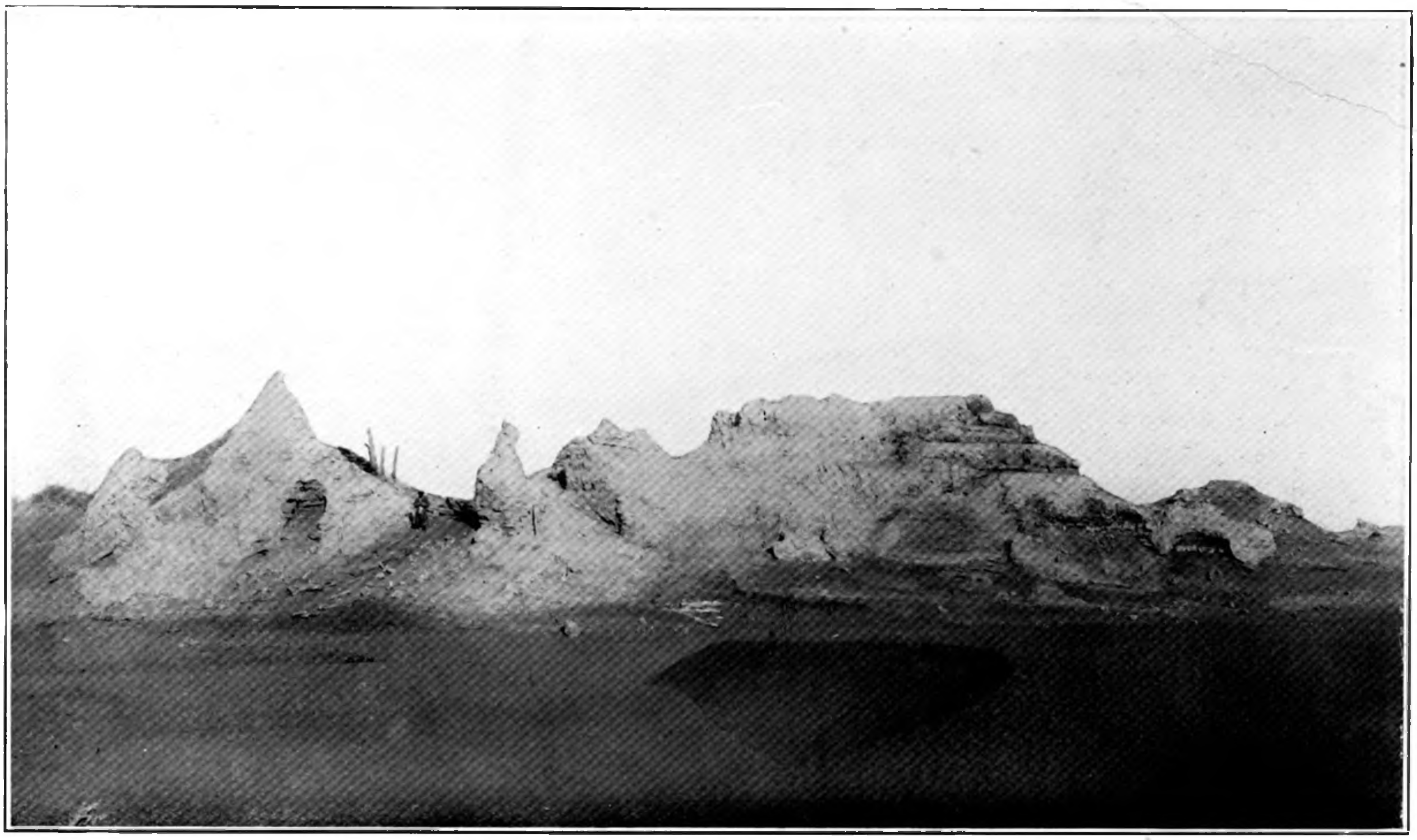
Owing to the necessity of saving our hard-worked camels and men any additional hardships, I could not strike across the desert to Endere by any other route than the one safely followed in 1901. Otherwise I should have preferred to use the opportunity for crossing the unexplored belt of desert between the Niya Site and the end of the Yār-tungaz River. As our marches, therefore, lay by the route already surveyed, there is no need to describe them.[2] The small settlement of Yār-tungaz Tārīm of which I have given some account in my former Report, and which I reached once more on November 3, presents all the characteristic features of a terminal oasis on a small scale.[3] So it would be naturally tempting to look for the remains of earlier occupation in the desert beyond the present river end. But the existence in that direction of ancient remains of any sort was uniformly denied by all local informants, and there was the additional fact that Prof. Huntington,

[1] Now shown in Descriptive List as E. VI. 009.

[2] See *Ancient Khotan*, i. p. 418.

[3] Cf. *ibid.*, p. 419.

76. RUINED DWELLINGS WITHIN CIRCUMVALLATION OF BILEL-KONGHAN, NEAR GATE, PARTIALLY CLEARED.



77. SOUTH SEGMENT OF CIRCUMVALLATION OF T'ANG FORT, ENDERE SITE, WITH GATE, SEEN FROM OUTSIDE.

78. INTERIOR OF RUINED T'ANG FORT, ENDERE SITE, SEEN FROM NORTH-EAST.

In foreground walls of large structure E. III, before excavation. A marks position of earlier refuse deposit under fort wall, B that of Buddhist temple in centre of fort.

79. RUINED TOWER, E. vii, WITH REMAINS OF WIND-ERODED DWELLING IN FOREGROUND, ENDERE SITE.

in 1905, had vainly searched for such during a stay of several days,[4] so that I decided to lose no time on this ground.

Conditions at Yār-tungaz Tārīm.

At the little oasis conditions had not changed perceptibly since my former visit. My old host, Abdul Karīm Ākhūn, complained of bad harvests, caused chiefly by the vagaries of the river, and of the trouble and expense it cost to protect irrigation against these frequent diversions of the main water channel. Yet I found no difficulty whatever about obtaining several weeks' abundant supplies for my large party, reinforced as it was by a fresh contingent of labourers from Niya. That the water-supply would suffice for much more extended cultivation was acknowledged on all hands. According to my Niya informants such expansion had so far been prevented only by want of additional labour, old Abdul Karīm, the owner of the whole settlement, lacking the energy to attract it. I heard no complaints of cultivation suffering through any special salinity of the water.[5]

Search for ruins at Bilēl-konghan.

When I started from Yār-tungaz Tārīm on November 4 towards the Endere River my immediate goal was not the ruined area from which Sadak asserted he had brought away his Kharoṣṭhī tablet, but another 'Kōne-shahr' which his father, Samsak, alleged he had visited years before in the desert to the west of the river's terminal course. On my former visit information about it had been kept from me. The assertion of complete ignorance would have probably been maintained by the Yār-tungaz people also on this occasion, had I not been able to quote in support of Samsak's statement the testimony of Prof. Huntington who, as I knew from a note communicated through Mr. (now Sir) George Macartney, had, during his survey of this tract a year earlier, visited ruins manifestly corresponding to the Mazār shepherd's description.[6] At last, after much questioning, an old herdsman of Yār-tungaz, Kutluk by name, owned up to a knowledge of the ruins. He declared them to be situated in that broad belt of low dunes and living desert vegetation for which the map attached to *Ancient Khotan* records the name of Bilēl-konghan.

Arrival at Bilēl-konghan Site.

The ground covered on the first day, with its high ridges of sand alternating with salty depressions marking ancient beds of the Yār-tungaz River, has been already described.[7] We halted for

[4] Cf. *Pulse of Asia*, pp. 210 sq.

[5] Prof. Huntington, *Pulse of Asia*, p. 212, considers the water of the Yār-tungaz River to be so highly charged with salts as to render permanent cultivation impossible. I did not notice this at the time, nor was the point mentioned to me when making my local inquiries. Only exact chemical analysis and comparison with the water of other rivers in this region could furnish a safe argument.

It will be convenient to record here that I was unable to visit the alleged 'ruins' of which Prof. Huntington heard as situated upstream about fifty or sixty miles from the terminal settlement, and which he mentions as 'Haiyabeg, the large agricultural village of ancient times' (p. 212). But I took care to enjoin a search for them on Naik Rām Singh, my ill-fated assistant, when, in March, 1908, I let him start on that visit to Mīrān from which he was doomed to return blind (cf. *Desert Cathay*, ii. pp. 432 sqq.). He duly visited the place on his way from Niya to Charchan and found it to be situated close to the river-bed, about six miles to the south of the caravan track. He described it to me as a small 'Tati' with patches of eroded ground showing fragments of broken pottery of rough make, without a trace of structural remains. The seven specimens brought back by him are all of coarse hand-made pottery of ill-levigated clay fired in an open hearth. The clay is generally red on the outside, blackish-grey within. Coarse pottery of this kind appears to have been made for local use in the eastern parts of the Tārīm Basin through widely distant periods down to modern times. In the present state of our knowledge such débris can furnish no reliable indication as to the age when that 'Tati' was occupied. The following is a list of the specimens:

Yart. 001. Pottery loop handle from shoulder of pot. 3″ across.

Yart. 002. Pottery fr. orn. with band of double stick-drawn festoons. $2\frac{9}{16}'' \times 1\frac{13}{16}''$.

Yart. 003. Pottery fr. of jar with flat rim. $1\frac{15}{16}'' \times 1\frac{1}{2}''$.

Yart. 004. Pottery fr., black with grey-red exterior face. $1\frac{7}{8}'' \times 1\frac{5}{16}''$.

Yart. 005. Pottery fr. of cylindrical neck of vase made separately and 'luted' on to body. Band of punched orn. on shoulder. $2\frac{1}{2}'' \times 2\frac{7}{16}''$.

Yart. 006. Pottery fr., vertical-edged rim of jar. $1\frac{7}{8}'' \times 1\frac{1}{8}''$.

Yart. 007. Pottery fr. of open-mouthed vessel with out-turned rim. $1\frac{15}{16}'' \times 2''$.

[6] A reference to this visit is found in his *Pulse of Asia*, p. 217.

[7] Cf. *Ancient Khotan*, i. pp. 419 sq.

the night in the narrow waterless plain known as Yantak-chaval. Next day, instead of taking the shepherd track towards Endere Tārīm followed by me in 1901, our guides led us eastwards for about six miles until we struck the edge of the Bilēl-konghan depression. It presented itself here as a wide area covered with high and isolated tamarisk-cones and fairly thick Toghrak jungle growing amidst low dunes. In my Personal Narrative I have described the trouble and time which the search for the ruins cost us on this deceptive ground and how at last, as I led my big convoy for safety's sake towards the Endere River, I stumbled upon the 'Kōne-shahr' quite close to the course we were steering.[8] Its position, as seen in sheet No. 40 of the map, proved subsequently to be about five miles to the west of the western terminal bed of the Endere River which in 1901 I had found dry, but to which the errant river had now returned again.

At first sight the appearance of the ruins was far more suggestive of an 'old town' than that of the widely scattered structural remains or pottery-strewn 'Tati' sites to which the term is indiscriminately applied by all people in the Tārīm Basin. Here in the midst of a plain comparatively clear of tamarisk growth and overrun only by slight dunes, I found a roughly oval area enclosed by a clay rampart still traceable at most points and crowded with dwellings rudely constructed but on the whole well preserved (see Fig. 73). Subsequent examination showed that the irregular oval within this circumvallation measured about 263 yards on its greatest axis, from north-east to south-west, and about 210 yards across where widest (see plan, Plate 19).

Construction of Bilēl-konghan dwellings.

The houses, as clearly seen in the photographs (see also Fig. 76), generally showed roughly built walls of clay, either merely stamped or else with occasional layers of small coarse bricks. The roofs were invariably constructed of rough Toghrak trunks overlaid with brushwood and earth, and had survived in many cases more or less intact. Some three or four houses had walls constructed of reed bundles and plaster, with posts of unhewn Toghraks taking the place of timber framework. Two small single-roomed structures, one of them burned down to within a few feet from the ground, were built wholly of Toghrak trunks left in the round and set up in palisade fashion. These rough dwellings, whether consisting of a single room or several grouped side by side, were scattered over the enclosed area without the slightest sign of arrangement, as the plan shows. But somehow the largest seemed to keep close to the encircling wall.

Circumvallation.

This circumvallation was as crude as the structures within or the ground-plan itself. It consisted of a mud rampart about sixteen feet broad at the bottom, carrying at a height of about eight feet a platform of rush layers fixed on roughly hewn beams. On the outside edge of the platform there rose a parapet, about one and a half feet thick, built of irregular lumps of clay. Portions of this, standing to a height of four feet, survived near the gate, as seen in the photograph (Fig. 84). This gate, the only one I could trace, stood on what may be considered the south-east face of the enclosure. It was eleven feet wide, seventeen in depth, and still retained its massive door folds of roughly hewn Toghrak beams in position. The outer face of the rampart showed stamped mud, with intervening irregular courses of shapeless clay lumps serving for bricks. The whole looked greatly inferior in constructive strength and appearance to the rampart of the T'ang fort of the Endere Site. Almost the whole of this circumvallation could be traced with ease except on a portion of the north face where tamarisk-cones rising about fourteen to sixteen feet above the original level covered it. Wherever clear of sand the line of wall showed plain marks of having been subjected to fire. Charred fragments of wood lay on or near the rampart, and its clay was reddened by burning.

Indications of late date of remains.

A rapid preliminary inspection sufficed to convince me that the remains of this 'deserted village' —for as such it could properly be designated in spite of its modest rampart—could not claim any

[8] See *Desert Cathay*, i. p. 303.

great antiquity. Neither within nor without the enclosed area could I trace any signs of serious wind erosion, that unfailing impress left by time upon all old sites in this region. In spite of very scanty protection by sand, the rough posts and roof beams exposed in the ruins showed little of that far-advanced bleaching and splintering which by experience I had learned to recognize in timber of old sites as the infallible mark of prolonged exposure to winds and climatic extremes on desert ground. The uniform roughness of construction observed held out little promise of finds archaeologically useful, and the number of the dwellings was embarrassing at the start. Luckily the adequate posse of labourers I had brought with me, reinforced as it was by nearly a dozen men raised at Yār-tungaz, made rapid progress possible in our experimental clearings.

Experimental clearings.

Work was started on two of the less coarsely built structures northward (*a*, *b* in plan, Plate 19). The drift sand which filled them did not reach the low roofing made of rough Toghrak trunks, with a layer of brushwood and earth above. But it had sufficed to protect the walls which were formed here of vertically fastened bundles of reeds faced outside with a layer of mud. The timber framework supporting the whole showed none of the careful carpentry I had found at all ruins of the Buddhist period from Dandān-oilik to Endere and which is common also in all modern houses of substantial construction in the Khotan region. Here it consisted of mere unhewn Toghrak posts with other trunks laid across the gable ends, as seen in Fig. 76. The few rooms contained in each of these huts and in those subsequently cleared were found absolutely bare of fittings. There was not even the comfort of a mud-built sitting platform, such as even poor cultivators' houses in the modern oases ordinarily display, and which came to light in even the least spacious dwellings of the Niya Site. Nor did we come upon a single built fire-place; but in one or two instances a sunk hearth in the rough floor, and a smoke-hole in the roofing above it, showed where the dwellers used to light their fires.

No signs of prolonged occupation.

The experience was repeated when we continued the clearing at a series of the small 'houses' built with walls of stamped mud or rough lumps of clay used like bricks. Nowhere did we come upon the remains of furniture or household implements, however humble, with the single exception of the hollowed-out trunk of a Toghrak which might have served as a trough. Even for fragments of pottery, elsewhere the commonest marks of earlier occupation, I searched here in vain. But perhaps the most curious of these negative features was that nowhere, within or without the ruined dwellings and sheds, did we strike any of those accumulations of refuse or dung which in this region invariably adjoin any habitations tenanted for some length of time, whether ancient or modern. It was clear that there was little or no hope here of gaining datable archaeological evidence. So I did not think it advisable to sacrifice more than two days to the site. In making its plan, too, we had to be content with marking the position of each separate 'house' and its approximate outside measurements, the division of individual rooms or sheds being indicated only quite roughly.

Observations on physical conditions.

In the end, close observation of the general conditions prevailing helped to reveal some facts which have a definite bearing on the question as to the origin and character of this curious site. As already stated, I was struck from the first by the absence of marks of wind erosion. This fact was in itself a clear indication of relatively recent date for the ruins. But it helped also to emphasize the significance of certain other features. Near the circumvallation there were extensive patches of ground clear of drift sand. Yet in vain did I look on their flat expanse for any clear traces of the careful terracing and division of fields for irrigation purposes which ancient cultivated soil retains for long periods wherever surface erosion is absent.[9] Nor could I find anywhere the remains of fruit-trees or cultivated poplars, though the trunks of dead Toghraks rose in plenty both within and without the enclosure. Many of these Toghraks had died while still young; but others were big

[9] Cf. for such traces observed at Ak-sipil, *Ancient Khotan*, i. p. 474.

and of great age, and these, characteristically enough, were inside the wall and were found mostly in open spaces left between the quarters. Evidently they had grown up there before the latter were erected and had been spared for the sake of their shade when clearing and building began. The way in which these patriarchs of the desert jungle had preserved most of their minor branches (see Fig. 76), was a sign that their death had taken place in a comparatively recent period. Everything supported the impression that the abandoned settlement belonged to the Muhammadan epoch and to a not very distant part of it.[10]

Attempt at agricultural colony.

If we take into account what can safely be inferred from the uniform roughness of the dwellings and the total absence of refuse heaps, the following suggests itself as the most likely explanation. At a time when the Endere River was following a terminal course lying west of its present bed (or beds) and perhaps connected with the dry river-bed traceable higher up near Korgach and Tokuz-kōl (see Map-sheet No. 40), it must have been easy to bring water to the wide open plain now covered with tamarisk and dead or dying Toghraks. Thus a colony had been planted here in the hope of utilizing the chance offered for an agricultural settlement. But the provision of a circumvallation and the crowding of its interior with numerous dwellings, all of a uniform type and manifestly provisional, seem to point clearly to a scheme of colonization very different from the haphazard growth of scattered holdings usual in the case of such 'new lands'.

Explanation of colonizing effort.

Geographical and antiquarian observations combine to make it easy to account for such a colonizing effort in this position. In discussing below the far older remains to the east of the Endere River, I shall have occasion to indicate the special importance which the area of vegetation along the terminal course of the Endere River must always have claimed in historical times as the only possible position for a half-way station on the desert route, some 200 miles long, between Niya and the oasis of Charchan. The ruins of older fortified stations found near the east bank of the river undoubtedly date from successive endeavours to establish here a settlement which would help to facilitate and protect traffic on the route leading by the Taklamakān edge from Khotan to Lop-nōr and China. It thus seems reasonable to connect the later ruins of this fortified village with a systematic endeavour made in Muhammadan times for the same purpose.

Possible causes of abandonment.

The change in the site chosen for the new settlement was, no doubt, dictated by a temporary shifting of the Endere River course. From the absence of all traces of agricultural development near the site and from other indications previously mentioned, it is equally certain that the attempt must have soon failed. But of the direct cause of this abandonment it is impossible to make sure in the absence of any definite evidence. A number of causes can be thought of, which might uniformly have produced the early failure of this colonizing venture. Under the special physical conditions prevailing, another shift of the river to where it now flows, fully five miles to the east, would alone have sufficed to make irrigation impossible. Attention must also again be called to the curious observation that the rampart which had borne a superstructure of rush bundles fixed on rough beams, showed throughout its exposed portion marks of having been subjected to fire. Considering that several of the huts cleared had also their timber partially burned, it seems difficult to resist the conclusion that a conflagration had played its part in the early end of the deserted settlement, even though the particular circumstances escape us. From the wide range of conjectural explanations it will suffice to mention one only, which has been suggested to me by the structural peculiarities of the ruins. I mean the possibility of their marking one of those short-lived attempts at forcible colonization in which Central-Asian rulers down to quite recent times have so often indulged in dealing with

[10] This has been quite correctly recognized also by Prof. Huntington; cf. *Pulse of Asia*, p. 218. He mentions as a proof that the ruins comprised a mosque. This is likely enough; but I was not able to distinguish which of all these rude structures might have served that purpose.

undesirable subjects or otherwise useless captives. In that case we could easily understand the improvised nature of the quarters, their wholly unusual crowding, and finally that peculiar roughness of construction which struck me at the time, and which I do not remember to have seen anywhere in the Khotan region apart from mere shepherds' huts.

Colony of Endere Tārīm.

In conclusion a passing remark about that ever-present cause of physical change in these parts, desiccation. That it has been at work on the Endere River as elsewhere there can be no doubt, and Prof. Huntington has discussed the indications of it with his usual lucidity.[11] But there seems no reason for seeking any connexion between this slow-working cause and the abandonment of the fortified village; for, on the one hand, there is no proof that here cultivation was ever seriously started, and on the other, there is the fact that even at the present day a small agricultural settlement exists at Endere Tārīm, some ten miles further down the river's present course. I could not spare time for a visit to this colony. But its principal settlers joined me while at Bilēl-konghan and supplied interesting information about local conditions.

Irrigation troubles and projects.

According to their statement the troubles against which this modern representative of the terminal oasis of Endere struggles, arise from the frequent shiftings of the main channel. These are caused by the heavy *ak-su* or summer floods and make maintenance of their irrigation canal difficult. Confirmation of their statement was supplied when, on my subsequent march to the Endere River, as described in my Personal Narrative,[12] I found that the river had completely reverted to the bed which in 1901 was known as the *Kōne-daryā*.[13] It was curious, too, to hear the settlers discuss an engineering project from which they hoped for full protection against all such troubles, but which they recognized to be wholly beyond their present resources. It was to keep the existing bed exclusively for the *kara-su*, or spring-fed water-supply of the river, and to divert the flood-water, or *ak-su*, by means of a big dam built somewhere higher up in the vicinity of the Endere ruins into the wide plain about the abandoned old village. The amount of *kara-su* permanently available was declared to be ample for a much larger settlement than the present Endere Tārīm. It was, in fact, estimated by my Niya men at ten 'Tāsh', i. e. sufficient to move ten millstones. Here, too, only prolonged and careful study by an irrigation expert can furnish definite guidance as to irrigation possibilities in the past and present.

Section II.—EXCAVATIONS AROUND AND WITHIN T'ANG FORT OF ENDERE

Previous explorations at Endere.

On the morning of November 8 I sighted once more the high Stūpa ruin which forms the conspicuous landmark of the ancient site of Endere first visited by me in 1901. Then want of time had obliged me to confine my exploration to the Stūpa and to the interior of the ruined fort about one mile to the south-east (Fig. 78),[1] and even within the latter to leave uncleared some apartments which were too deeply covered with drift sand. So my 'archaeological conscience' was eased when once more my camp was pitched by its side. A rapid inspection assured me that the remains of the little temple in the centre (see plan, Plate 20), which had then disclosed interesting remains of manuscripts in Brāhmī script and Tibetan and a dated Chinese sgraffito of importance, had not suffered in the interval. My satisfaction was great when, on superficially clearing the sand from the north-west corner of the temple cella, the sgraffito again came to light, just as I had seen it before. Thus

[11] See *Pulse of Asia*, pp. 213 sqq. That some of the archaeological and historical facts adduced have to be differently interpreted does not affect the main argument.

[12] See *Desert Cathay*, i. pp. 307 sq.

[13] Cf. *Ancient Khotan*, i. p. 420.

[1] Cf. for previous work at the site, *Ancient Khotan*, i. pp. 421 sqq.

Chiang Szŭ-yeh was able to verify by actual inspection that the reading of the *nien-hao* as *K'ai-yüan* was correct, and that the record left on the wall here dated from the year corresponding to A.D. 719.[2]

Sadak's ruins.

Then I hurried to the spot where, only a quarter of a mile to the south, Sadak declared that he had found the Kharoṣṭhī tablet, which he had brought to me at Imām Ja'far Sādiq, now marked E. vi. 009 in the List. The ground there was covered with low hillocks of sand bearing tamarisk dead or living, eroded banks of clay showing up between them. The spot to which Sadak took me without any hesitation looked just like one of these terraces, only less steep. But when I had reached it, I quickly recognized that what rose a few feet above the easy sand slope was not a mere 'witness', but a solid mass of refuse with the broken brick walls of a small house emerging through it. The unpretending ruin had probably been laid bare by a slight movement in the adjoining dunes since my first visit to the site, and Sadak knew that two men from Niya seeking for 'treasure' and antiques had first noticed it a year or two before his own prospecting. They had contented themselves with digging holes here and there, and had left the refuse thus extracted lying close by. I had scarcely begun to have this searched when, amidst plentiful fragments of pottery, rags of felt and coarse fabrics, and clods of stable refuse, there emerged a small wooden disc, E. vi. ii. 2, evidently cut out from a tablet and bearing parts of five lines in Kharoṣṭhī. Sadak's statement had found speedy and conclusive confirmation, and his reward came with equal promptness.

Excavation of ruin E. vi.

Setting the men at once to work we had most of the ruin, marked E. vi, cleared by nightfall. A thick layer of stable refuse and straw covered the top, extending uniformly over the remains of walls built of sun-dried bricks and only three feet high, and over the débris which filled the two rooms clearly traceable between them (see plan, Plate 21). The débris consisted chiefly of decomposed brickwork. Evidently here an earlier structure had been levelled down to within three feet of the original ground-level, and its place subsequently occupied by a shed where horses and cattle were stabled. From the floor of the two rooms shown in the plan and that of two adjoining apartments (iii, iv), which erosion had almost completely destroyed, there were recovered, besides small miscellaneous objects and three fragmentary tablets nearly effaced, a Kharoṣṭhī document, E. vi. ii. 1 (Plate XXXVIII), which is perfectly preserved and presents points of distinct interest. It is an oblong tablet, measuring about eight by four inches and showing nine lines of clear Kharoṣṭhī writing of a peculiar type, unusually stiff and with flourishes which recall the cursive Brāhmī *ductus* of a much later period. A number of curious characters, perhaps intended for name-marks or signatures, appear in the line before last. Another curious find was a strip of flexible bark, E. vi. iii. 1, inscribed on the inside with a line of very cursive characters which may possibly be Brāhmī, but have not yet been deciphered. Here was discovered also a canvas bag, E. vi. 0010 (Plate XXVIII), with two fire-blocks in it, of the type already described above and showing fire-holes still blackened by smoke.[3]

Ruins at Endere mentioned by Hsüan-tsang.

But of far greater interest than any individual relics was the new light which the discovery of this small ruin began to throw on the history of the whole Endere Site. When, in 1901, I excavated the ruined shrine E. i within the circular fort, I recovered from it the Chinese sgraffito dated in A.D. 719, as well as a considerable number of manuscript remains in Brāhmī, Tibetan, and Chinese. From the evidence thus supplied I then concluded that the fort must have been occupied by a Chinese post about the first decades of the eighth century A.D., and that it was probably abandoned during the Tibetan occupation which followed in the course of that century.[4]

[2] Cf. for this inscription and its significance, *Ancient Khotan*, i. p. 428.

[3] Cf. above, p. 233, and Mr. Joyce's note, *Man*, xi. 3. 24, with Figs. 2–4.

[4] Cf. *Ancient Khotan*, i. pp. 428 sq.

In discussing the Endere Site in my former Report, I called attention to the interesting fact that Hsüan-tsang, who passed along the desert route from *Ni-jang*, or Niya, to *Chê-mo-t'o-na*, i.e. the present Charchan, on his return journey to China about A.D. 645, found no inhabited place on the ten days' march.[5] But after describing the 'great desert of drifting sands', which he entered east of Niya, in terms closely recalling Marco Polo's account of the great desert between Lop-nōr and Sha-chou, the pilgrim arrived, about four marches after leaving Niya and six from Charchan, at ruins of abandoned settlements which the tradition of his time ascribed to the 'ancient *Tu-huo-lo* kingdom'. This country, he tells us, had long been deserted, and all its towns were unoccupied wastes.[6]

Importance of new chrono-logical evidence.

The topographical evidence derived from the distances which Hsüan-tsang records from Niya and to Charchan respectively, and which I have discussed already in my former Report, made it quite certain that the remains of the abandoned settlements which Hsüan-tsang saw were to be looked for in the close vicinity, if not in the very locality of the ruined fort which I had explored in 1901.[7] Yet seeing that about A.D. 645 this tract was already a waste abandoned to the desert, it had then seemed rather puzzling how to account for the existence in it of the ruins excavated by me, which were undoubtedly occupied during the early part of the eighth century. But now as soon as I had verified Sadak's find by the discovery of more Kharoṣṭhī tablets in the same ruined structure, and under my own eyes, I felt sure of the right explanation. Clearly here we had definite archaeological evidence of an old site in the desert having been reoccupied after the lapse of centuries—and a fresh instance of the often proved accuracy of Hsüan-tsang's topographical statements. The Kharoṣṭhī records on wood now brought to light are shown by their palaeographic character to date from the same period as those of the Niya Site which, as we have seen, was abandoned towards the end of the third century A.D. Hence the conclusion is obvious that the small house, E. VI, yielding these tablets must have belonged to the earlier settlement which Hsüan-tsang found completely deserted and in ruins.

Reoccupation of earlier site.

That the area must have subsequently come under occupation again, probably in consequence of the improved conditions and increased traffic eastwards which followed the establishment of Chinese control over the Tārīm Basin within a little over ten years after Hsüan-tsang's passage,[8] is proved by the ruined fort; for my excavations of 1901 showed that this served for a Chinese garrison at the commencement of the eighth century A.D. But even the condition of the earlier structure, E. VI itself, testified to this reoccupation; only thus did it seem possible to account for the layers of straw, plentifully mixed with wheat stalks and grains (for specimens, see E. VI. i. 001), and of stable refuse which extended uniformly both over the top of the broken walls, and the débris of bricks filling the rooms between. Evidently when the site was resettled in the second half of the seventh century some one had found it convenient to erect his homestead or stable over the mound formed by the tumble-down ruin, just as near Domoko, on ground reconquered from the desert, I had seen the tops of tamarisk-cones utilized as sites for the new settlers' dwellings.[9]

The search, which was continued on November 9 in the vicinity of the T'ang fort, revealed

[5] Cf. *Ancient Khotan*, i. p. 435.

[6] See Julien, *Mémoires*, ii. pp. 246 sq.; Watters, *Yuan Chwang*, ii. p. 305; Rémusat, *Ville de Khotan*, p. 65.

[7] With reference to the distances indicated in *Ancient Khotan*, i. p. 435, note 11, I may add now that the road distance from the Endere fort to Charchan, as determined by actual measurement with the cyclometer, amounted to 115 miles. The length of route followed by me in 1901 between the Endere Site and Niya was about 98 miles. In comparing these distances with the six and four marches respectively, which Hsüan-tsang reckons, it must be borne in mind that the caravan track from the Endere River to Charchan lies along an almost straight line, while the route I followed in 1901 from Endere to Niya winds considerably as the map in *Ancient Khotan* shows. In Hsüan-tsang's time a more direct route might have been in use. The direct distance from the Endere fort to Niya as measured on my map is 86 miles.

[8] Cf. *Ancient Khotan*, i. p. 59.

[9] See *ibid.*, i. p. 454; *Desert Cathay*, i. p. 252.

Remains of small Stūpa.

other remains of the earlier settlement. About eighty yards to the south of E. vi I found the badly decayed ruin of a small Stūpa, rising only eleven feet or so above the original ground-level. Of the lowest base, only the south face could be traced for about eight feet. Of an upper story, also square, the outlines survived for about fifteen feet on the west and ten feet on the north face. The whole was built solidly in sun-dried bricks, measuring about twenty by thirteen inches with a thickness of three and a half. On the south face of the lower base and about four feet above the ground, a row of tamarisk sticks fixed in the masonry had evidently served to support stucco mouldings. A cutting had been carried right through the little mound, no doubt, in search of treasure.

Clearing of ruin E. vii.

More puzzling at first sight were the remains of a tower-like mound, E. vii (Fig. 79), adjoined by scanty remains of a dwelling, which were traced about a quarter of a mile to the west of the T'ang fort, and of which the plan is shown in Plate 21. The timber and plaster walls of the house survived only to a height of about eight inches from the floor, but still showed clearly horizontal reed wattle. The fragments of two rectangular Kharoṣṭhī tablets found in room i definitely proved this ruin to date from the earlier settlement. Some small finds of pottery, silk fabrics, and painted wood were also made here. The mound to the east of the dwelling proved on clearing to be the ruin of a tower measuring about twenty-five feet square outside, of which the interior was completely filled with fallen masonry débris. The north wall, still rising about eighteen feet high, and about three and a half feet thick, alone retained its facing. This showed that the walls were constructed of courses of sun-dried bricks measuring twenty by thirteen inches and about four inches thick, with intervening layers of stamped clay one foot in thickness. Bricks of identical measurement seem to have been used in the other traceable ruins belonging to the earlier period of occupation. A badly decayed wall continuing the south face of this tower westwards in slightly reduced thickness for about fifty feet, might have formed part of an enclosure. But the true character of this and its relation to the ruined house could not be definitely determined.

Numismatic evidence.

About forty yards to the west of E. vii I traced the floor of a large but completely eroded structure, but was rewarded by no finds apart from a clipped copper coin of the *Wu-shu* type and a piece of pottery showing a rich blue-green glaze. The havoc here wrought by far-advanced wind erosion obviously accounted for the scarcity of structural remains of the earlier period; for pottery débris of distinctly ancient appearance was visible in abundance on all patches of bare soil for nearly a mile south of the fort. Moreover, the copper coins which were picked up near the fort showed the *Wu-shu* type. Their fragmentary state also attested the force of erosion. I shall have occasion further on to refer to the numismatic finds as a whole.

Discovery of Kharoṣṭhī document on leather.

While the clearing of these remains was still proceeding a chance find led me to discover that the clay rampart of the fort, built within a generation or two of Hsüan-tsang's passage, was in one place actually raised over a bank of consolidated refuse undoubtedly dating from the earlier Tu-huo-lo settlement of which he had seen the completely abandoned ruins. At a point about a hundred feet to the west of the fort's single gate (see plan, Plate 20, and Fig. 77), wind erosion had badly breached the circumvallation of stamped clay. Searching on the surface thus laid bare one of the men who passed by on his way to camp had his attention arrested by a small piece of folded leather sticking out from a hard layer of rubbish. On being called to the spot and extracting it with my own hands, I found it to be the well-preserved fragment of a Kharoṣṭhī document on leather, measuring when unfolded about $4\frac{1}{2}$ by $3\frac{1}{2}$ inches (E. Fort. 001. a; Plate XXXVIII). The writing of the nine lines seen on the inner surface and of the single line outside agreed, just as did the general arrangement and manner of folding, with the numerous similar documents on leather which N. xv, the richest refuse heap of the Niya Site, had yielded up in 1901.[10]

[10] Cf. *Ancient Khotan*, i. pp. 344 sqq.; ii. Plates XCI–XCIII.

I now had the bank of ancient refuse carefully cleared and ascertained that it extended right down to what seemed the natural soil of hard loess, six feet lower. On either side it was embedded between the stamped clay layers of the later rampart. There could be no possible doubt that the rampart, with characteristic indifference to solidity of construction, had been built up here encasing a small rubbish mound belonging to the settlement abandoned centuries earlier. Its contents consisted mainly of sheep-dung and twigs, with a plentiful admixture of rags of miscellaneous fabrics, including silk, felt, and coarse woollen materials (E. Fort. 0012–0018). Ancient rubbish embedded in fort rampart.

It is a matter of distinct archaeological interest to ascertain whether among all these fabrics there are any of cotton; for the use of the latter, as far as observations based on the results of my excavations go, has up to the present been proved only for sites dating from the T'ang period or later. In view of this criterion it is important to record that the expert report received from Dr. Hanausek on the representative specimens which were submitted to him for analysis, conclusively proves the absence of cotton among the rags excavated from below the rampart of the Endere fort. This negative evidence helps further to strengthen the conclusion already arrived at as to the early origin of this rubbish mound.[11] Here was found also a bone knife-handle (E. Fort. 001. c; Plate XXVIII), closely resembling the one found in ruin N. XXVI of the Niya Site. It seemed probable that the refuse deposit had attained considerable consistency long before the builders of the Chinese fort in the seventh century thought fit to embed it in their rampart, and I wondered how much more of the débris of the earlier site might still rest safely hidden under other portions of the circumvallation.

Owing to the heavy accumulations of drift sand which this circumvallation had helped to catch and retain, it had been impossible on my previous visit to clear all the rooms of the large structure forming the principal quarters of the fort. The greater number of labourers now available enabled me to complete this heavy task. From room iv in the south-east portion of this structure, E. III, we recovered the fine wooden pillar, six feet four inches high, seen on the right in Fig. 70, which once must have borne a double-bracket supporting the ceiling. The rich mouldings it shows can only have been produced by the turning-lathe—a remarkable feat seeing that the maximum diameter of the pillar was over thirteen inches. The equally well-worked though less massive pillar, seen on the left of Fig. 70,[12] was the only find which rewarded the excavation of the large hall in the north-west corner. This measured 46 by 27 feet and had a sitting platform 4 feet broad and 21 inches high along its north wall. The extant portions of the walls had here preserved their plaster facing, over six inches thick. Such plaster may be assumed to have once covered the massive brickwork in the other rooms also, where now it has fallen off by exposure. In the north-west corner of the adjoining court, vi, the whitewashed wall plaster survived to a height of about five feet and showed traces of small sketches in colour, including that of a kneeling figure robed in blue. There were remains of some Tibetan characters, too, but none sufficiently clear to be read with certainty.

In the area covered with stable refuse, to the north of the main quarters, we now discovered two small underground apartments completely filled with sand (see E. vii, viii in plan, Plate 20). They had no door or other opening and were evidently approached from above where the foot of timber and plaster walls belonging to an upper story could just be made out. Below this, the walls up to a height of six and a half feet were built of brick with a plaster facing. In both rooms there were elaborately modelled fire-places, as seen in the photograph of E. viii (Fig. 72),[13] showing that these were meant for shelter in winter. Just as in the dwellings of Niya and Khādalik the fire-place was Underground apartments with fire-places.

[11] For the details of Dr. Hanausek's painstaking analysis cf. below, E. Fort. 0012–0014, 0018, in Descriptive List.

[12] For elevations of these two pillars, see plan, Plate 21.

[13] For elevation of the fire-place in E. viii, see plan, Plate 21.

adjoined by a sitting bench which had doubtless served as a specially warm corner. Otherwise these rooms were found entirely empty. Since the fire-places here, as at all other sites, lacked chimneys, the trouble from smoke must have been considerable and in curious contrast to the standards of comfort otherwise observed.

Remains of timber at and near ruins.

It deserves to be noted that most of the timber used in these quarters of the Endere fort, as well as the beams and posts found exposed in plenty about the courts and the gate (Fig. 78), were of the wood of the cultivated poplar or Eleagnus (Jigda). The use of Toghrak wood seemed rare. This is a plain proof that by the time when the fort was erected cultivation must have been resumed for some time past in this vicinity. Yet the remains of dead fruit- or garden-trees, as far as I could trace them, were distinctly scanty. On the much-eroded ground north of the T'ang fort where, as we shall see, the main portion of the earlier settlement must be located, I found none. To the south of the fort traces of old arbours or orchards were also relatively rare and were found chiefly along the left bank of the ancient river-bed which was traced skirting the site on the east. This rarity of dead tree trunks can, I think, be accounted for by two circumstances. In the first place, those belonging to the more ancient settlement were bound to have been carried away for fuel when the abandoned oasis was partially reoccupied in T'ang times. In the second place, a similar fate is likely to have befallen most of the trees planted during this later period as soon as the T'ang fort and any homesteads near it were deserted in turn; for the locality is likely to have remained for centuries a usual halting-place for caravans passing by the great route close by, and dead trees would always be in demand for camp-fires, etc.

Section III.—SURVEYS OF EARLIER REMAINS AT ENDERE

Remains north of T'ang fort.

While the diggers under the supervision of Chiang Ssŭ-yeh and Naik Rām Singh were kept hard at work clearing the remaining quarters within the T'ang fort, I found time to survey remains farther away, both to the north and south, about which information had reached me, partly through brief notes of Prof. Huntington and partly through my new guides from Endere Tārīm. Already on my first arrival at the site in 1901 I had noticed that about half a mile to the north-east of the large ruined Stūpa there were numerous shapeless mounds of clay rising between the low dunes. Misled by plain indications of the great depth to which the ground near the Stūpa had been eroded,[1] I had then taken them from a distance for mere erosion 'witnesses', and want of time had kept me from any closer survey.

Eroded mound near Stūpa.

The photograph, reproduced in Fig. 80, of one of these clay terraces which I examined on November 8 at about forty yards' distance to the south-east of the Stūpa, will help to explain the deception. Up to a height of over fifteen feet this mound consisted of nothing but natural loess eroded by the winds, and it needed very close examination to show that the little clay tower which is seen on the left rising about eight feet higher, is of artificial origin, probably the last remains of a small Stūpa. In view of the depth of erosion around, and of the size of some brick fragments showing the characteristic thickness of three and a half inches, it may be safely assumed that this tiny ruin, too, goes back to the time of the 'Tu-huo-lo' settlement.

On proceeding to the cluster of clay mounds which Fig. 80 shows in the distant background, I soon ascertained that they had originally formed part of a large walled enclosure now half-buried amidst dunes and decayed by erosion almost beyond recognition. Tokhta Muhammad Khwāja, the intelligent settler of Endere Tārīm, had been right in talking of these remains as a 'Sipil'. By

[1] The Stūpa, as seen in *Ancient Khotan*, i. Fig. 50, stands now on a terrace of natural loess soil which rises fifteen feet above the eroded hollow immediately adjoining; cf. *ibid.*, p. 437.

closely observing the alignment of the fragments of wall still traceable here and there it was possible approximately to determine the area once enclosed, an oblong about 540 feet from north to south and about 340 feet across. The circumvallation could best be followed on the north and west; on the latter face, of which Fig. 81 shows the northern portion, the line of the wall could be measured for a distance of about 440 feet by the continuous chain of fragments which the process of erosion had not yet destroyed. On the east face the fragments of wall were much fewer, though extending a little further south than on the opposite face; the wall to the south had practically disappeared altogether. In view of the observations subsequently made as to the effect of wind erosion on the walled enclosures of sites surveyed further east, at 'Lou-lan', An-hsi, Ch'iao-tzŭ, etc., I think it safe to conclude from the above conditions that the destructive force of the wind and wind-driven sand must here have made itself felt with particular intensity and continuity from the north-east.

Ancient circumvallation north-east of Stūpa.

Wind erosion had evidently first breached the outer walls and then scoured the remains of whatever buildings the interior once contained. In the south-east corner of the walled area remains of massive walls seemed to indicate the former existence of a separate enclosure, measuring about 170 feet from east to west and 110 feet across. Whether these interior walls belonged to a large set of quarters as found in E. III or to a kind of citadel could no longer be ascertained. The only other structural remains traceable in the interior consisted of a small enclosure of which some remnants of the wall survived close to the highest fragment of the eastern wall face, seen in Fig. 83. It was significant that what had helped to protect them was a layer of consolidated sheep-dung, the relic of a later period when, perhaps, the least ruined structure within the abandoned 'old town' had served as a shelter for herdsmen. Elsewhere the ground within, where not covered by broad dunes, showed nothing but small pottery débris, mostly black or dark brown.

Effects of wind erosion.

The enclosing walls were formed at their base by a rampart of stamped clay, about thirty to thirty-five feet thick. This rampart appeared to have borne a superstructure built with courses of large sun-dried bricks set in thick layers of clay, as seen in Fig. 83. But there was little regularity in the construction, or else repairs had been frequent. Usually the courses of bricks were single, but in some places two or three successive courses had been used in the same way. Frequently the place of proper bricks was taken by shapeless lumps of fine clay. What is important to note is that the bricks throughout showed a fairly uniform size, 19 to 20 inches by 13 to 14, with a thickness of $3\frac{1}{2}$ to 4 inches. The same pattern was found in the ruins E. VI, VII, which were proved by epigraphical finds to belong to the earlier settlement, as well as in the southernmost ruins to be described below. But the bricks used in the buildings and the wall parapet of the T'ang fort differed distinctly in size.[2]

Construction of enclosing walls.

Owing to the lesser or greater effect of wind erosion in different positions the height of the actual remains of the wall above the pottery-strewn level of the interior varied greatly, from about ten to twenty-six feet. With the high tamarisk-cones rising above the north front of the circumvallation and the broad dunes filling a considerable portion of the interior, the whole made up a weird picture of desolation which even the openness of the vistas across the bare eroded areas all round did not help to relieve. For excavation there seemed no scope left here. But that these ruins, like those described south of the T'ang fort, went back to the period of the earlier settlement and were among those 'Tu-huo-lo towns' which Hsüan-tsang had found completely deserted, I could not reasonably doubt. Apart from the very definite indication furnished by the size of the bricks, there was striking evidence in the condition of the walls. Though much more massive in construction than those of the T'ang fort, their decay had advanced so much further as to be explicable only on

Remains of earlier town.

[2] Cf. *Ancient Khotan*, i. pp. 431, 434.

the assumption that their abandonment dated back long centuries earlier. And with this the much-worn appearance of the débris inside seemed in complete agreement.

'Tati' areas northward.

In view of the facts now made clear about the history of the site it appears highly probable that the large ruined Stūpa surveyed in 1901, as well as the 'Tati' débris which is found in abundance near it and around the walled enclosure to the north-east, belongs to the same early period. That such 'Tati' patches extend for a considerable distance northward is shown by Prof. Huntington's remarks and by the statements of my local informants.[3] But as no structural remains of any sort could be sighted in that direction and Prof. Huntington's experience confirmed the local assertion as to their total absence, I could not afford time for extensive excursions in that direction. Prof. Huntington assumes that these northern 'Tati' areas must have been deserted earlier. But no positive evidence is available on the point, and it will be well to bear in mind the peculiar limitations which the very conditions of such débris left behind by erosion impose upon the conclusions of the critical archaeologist.[4] Finds of coins, seals, and other approximately datable objects, may suffice to prove that the ground where they were found must have been occupied down to a certain period. But considering that erosion here causes relics of widely different ages to lie side by side on the same surface-level, no evidence is thus gained that other remains of the same 'Tati' do not belong to a much earlier period. Nor do such datable objects by themselves exclude the possibility of the ground having remained under cultivation much later or having been reoccupied at a period subsequent to their own date.

Coin finds on 'Tatis'.

These remarks apply with equal force to the numerous small objects which were picked up during my stay at the Endere Site from eroded ground and which may conveniently find mention here. In the Descriptive List below, those found in the vicinity of the T'ang fort have been shown separately from those collected on the 'Tatis' near the Stūpa and the ancient circumvallation northward. But a comparison shows no appreciable difference in the character of these small 'finds'. Chronologically special interest attaches to the coins, all Chinese and in copper.[5] Of those picked up near the T'ang fort or between it and the Stūpa most are of *Wu-chu* types current from the Later Han dynasty onwards. Two among them are of the clipped variety which Chinese numismatists seem inclined to associate with the (Liu) Sung dynasty of the fifth century A.D., but which may equally well be debased specimens of earlier issues. From the 'Tatis' near the Stūpa and northward come four *Wu-chu* pieces and one uninscribed coin of a type which is known from the Earlier Han dynasty onwards. In range these finds completely agree with those made during my visit in 1901.[6] The total absence of T'ang coins shows that the period of resumed occupation which the circular fort attests could not have lasted very long.

Glass fragments from 'Tatis'.

Among other small 'Tati' remains there are specimens of the prevailing pottery, both hand- and wheel-made (E. 001–004 ; E. Fort. 0020), and very numerous fragments of glass and bronze. The fragments of glass ware are of special interest as they include pieces which show in their ornamentation or technique unmistakable affinity to work well known in the classical West from the early centuries of our era. Thus the applied slip-work of E. Fort. 003, 0021 ; E. Stūpa. 001, 002 represents a method of decoration which, as Mr. Woolley observes, was particularly common in Europe in the third century A.D. The fragment of a glass bead, E. Fort. 007, gold-plated like the bead E. VI. 0014, shows a technique which points distinctly to importation from Western Asia. For further details the List below must be referred to. Here it may suffice to add that in the southernmost portion of the site, too, where bare eroded ground was much confined owing to abundant tamarisk-cones and the drift sand caught by them, an interesting piece of decorated glass was picked up. The

[3] See *Pulse of Asia*, p. 214.
[4] Cf. *Ancient Khotan*, i. pp. 381 sq.
[5] For a detailed list, see below, Appendix *B*.
[6] Cf. *Ancient Khotan*, i. pp. 429, 577.

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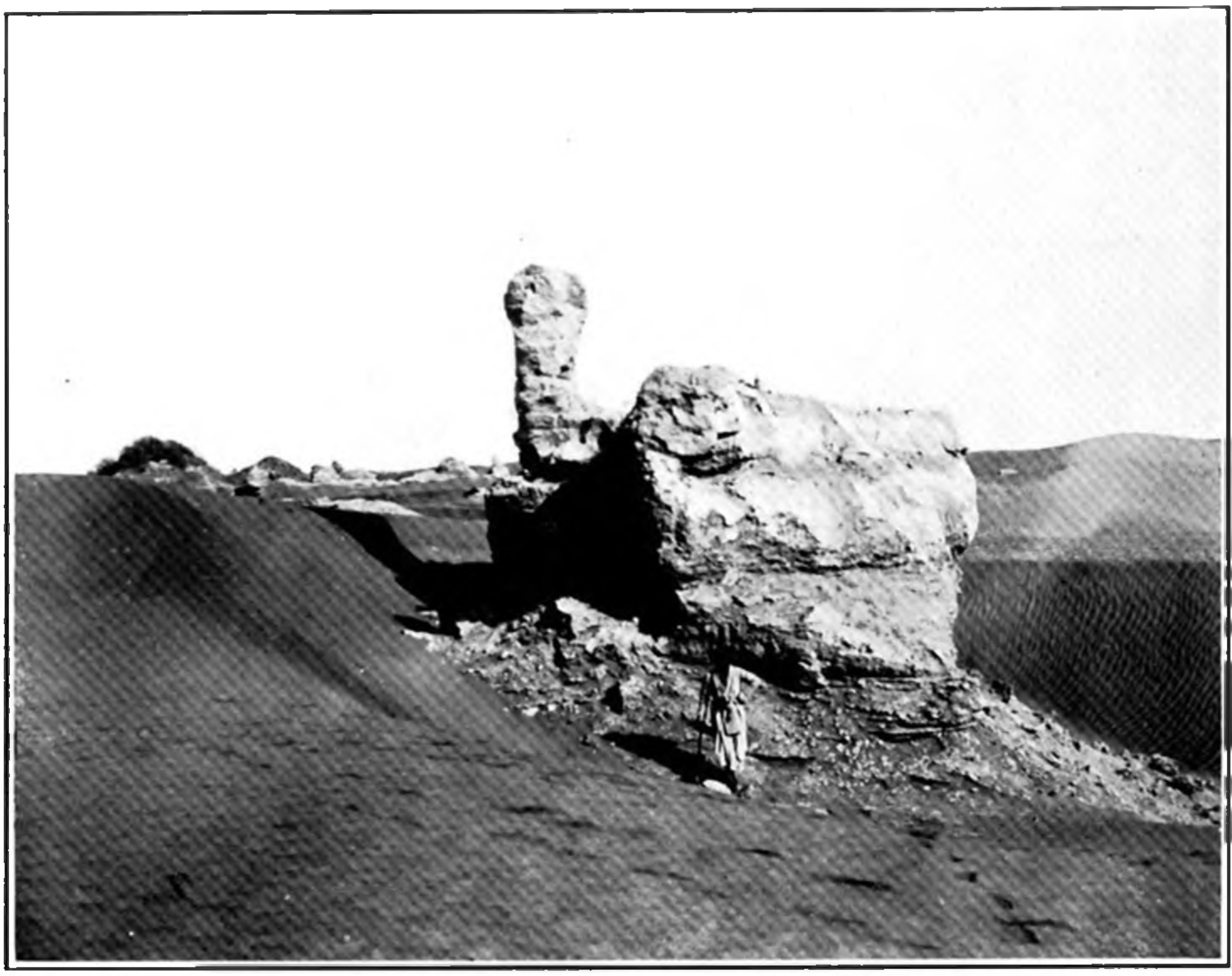
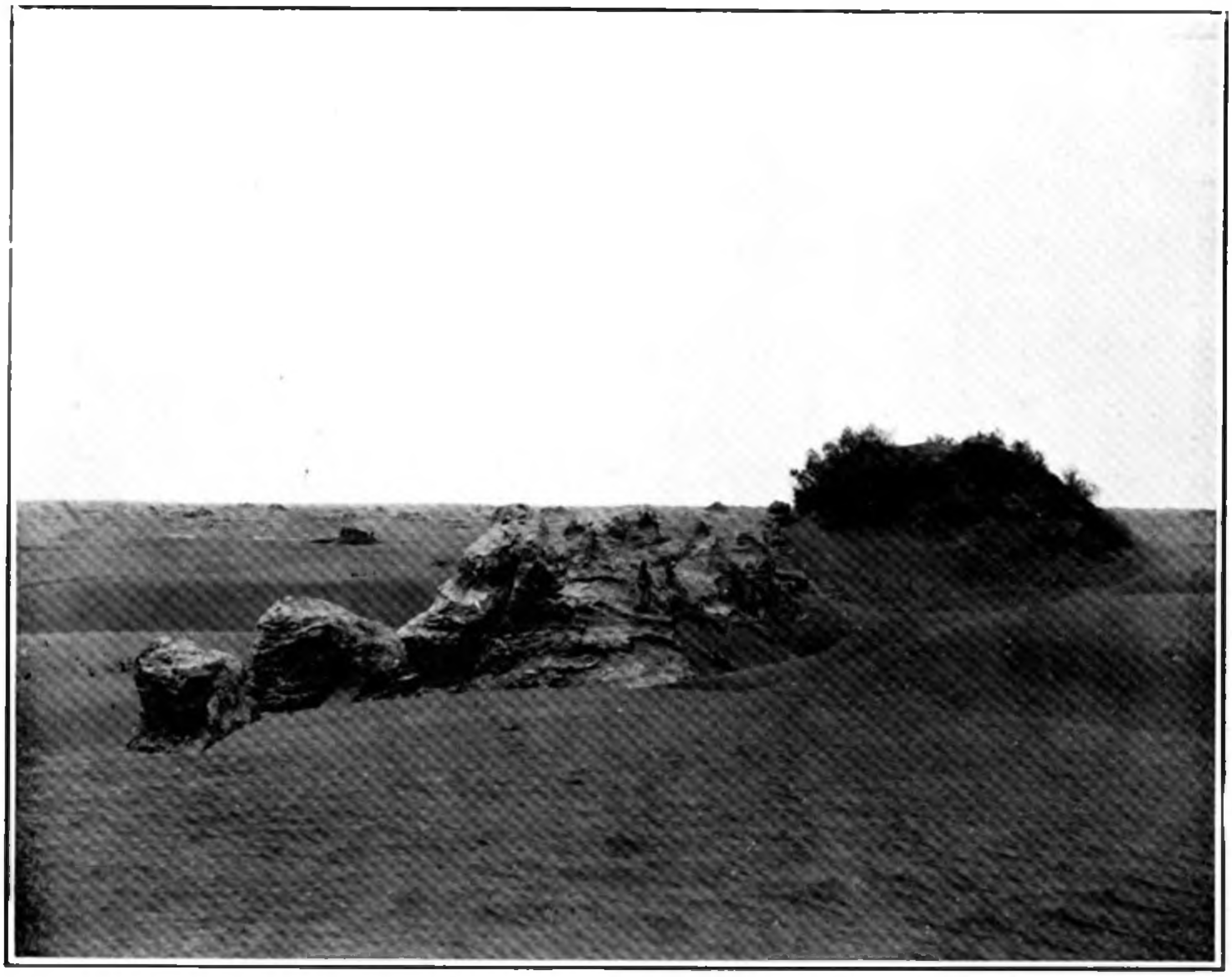
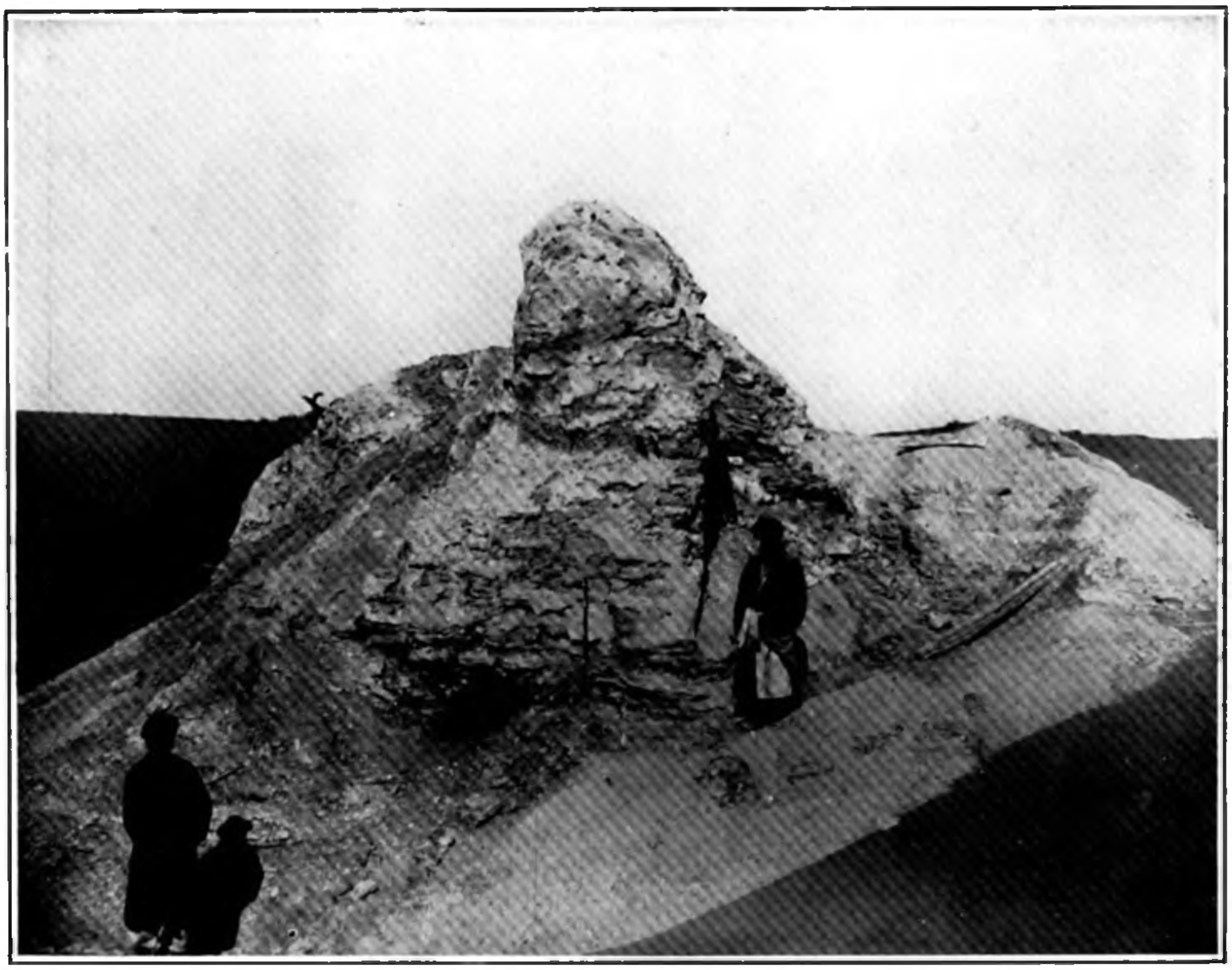


80. EROSION 'WITNESS' WITH MASONRY REMAINS ON TOP, ENDERE SITE.

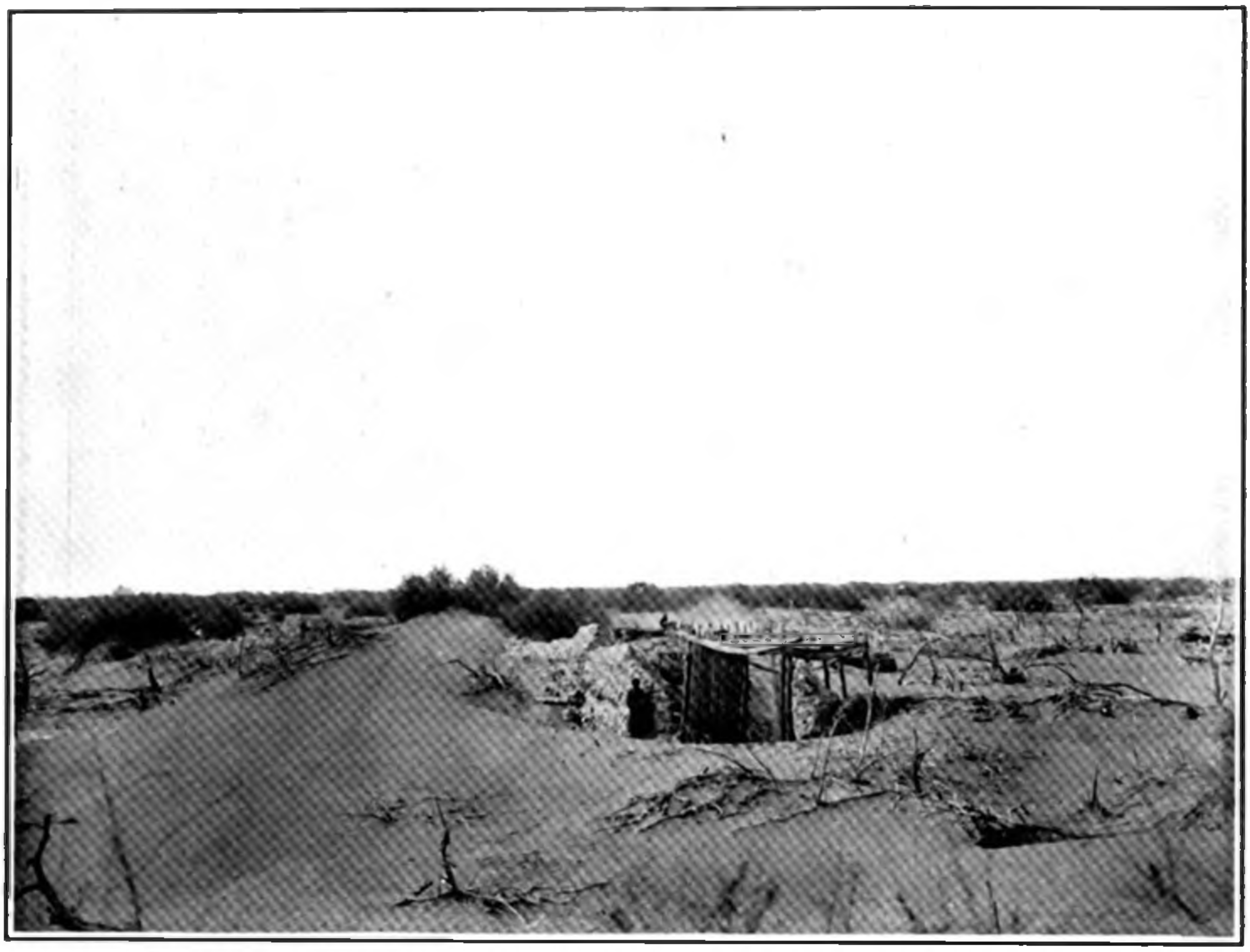
82. ANCIENT FORTIFIED POST AT S. END OF ENDERE SITE, SEEN FROM SOUTH.



81. REMAINS OF RAMPART AT N.W. CORNER OF ANCIENT WALLED ENCLOSURE, ENDERE SITE.



83. FRAGMENT OF EAST RAMPART OF ANCIENT WALLED ENCLOSURE, ENDERE SITE.

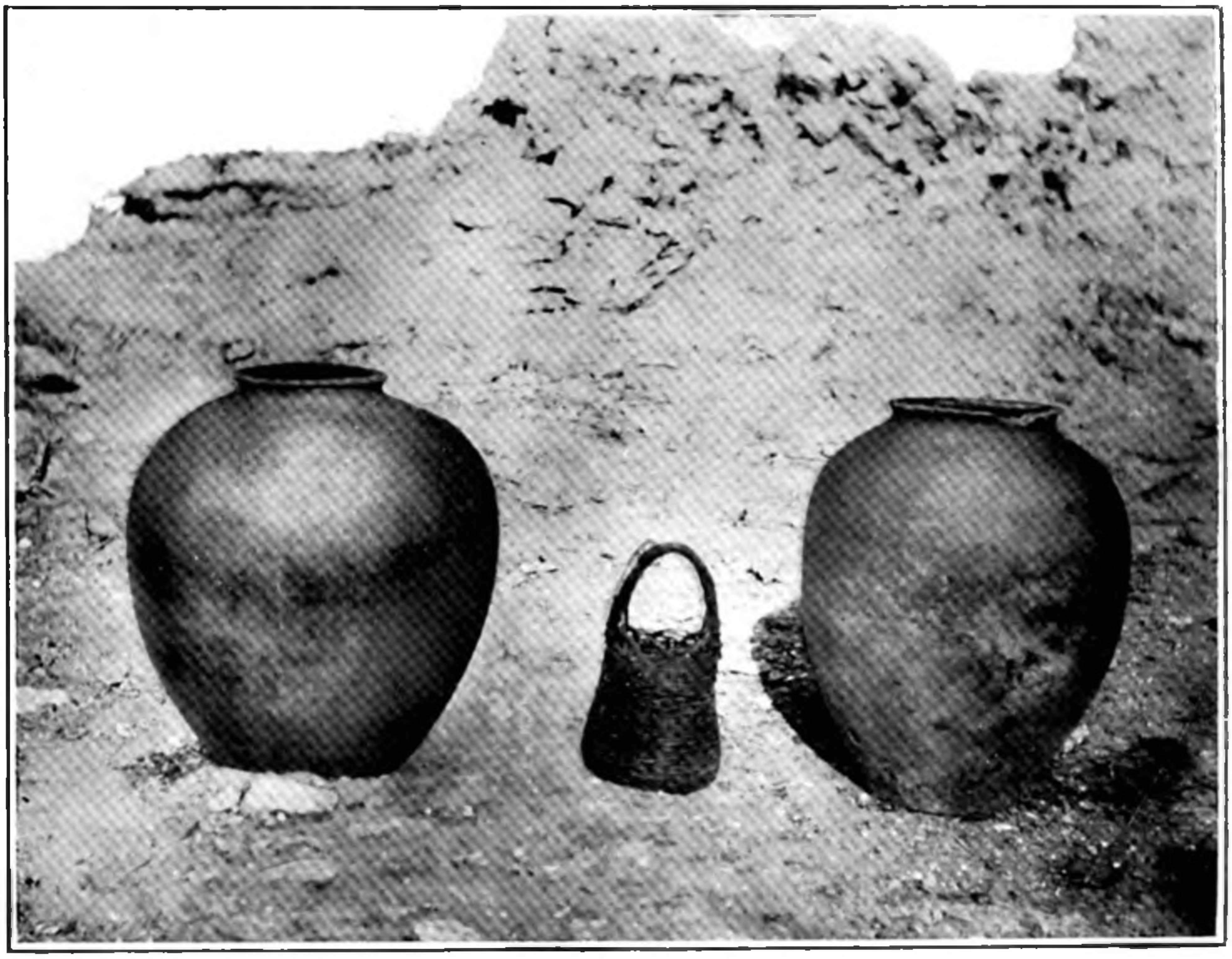


84. GATE IN S.E. SEGMENT OF FORTIFIED VILLAGE ENCLOSURE, BILĔL-KONGHAN, SEEN FROM OUTSIDE.

86. TAMARISK-CONE WITH OLD MUHAMMADAN GRAVES AT YALGHUZ-DONG, CHARCHAN RIVER.

(See p. 305.)

85. ANCIENT ORCHARD AT VĀSH-SHAHRI SITE.



87. LARGE EARTHENWARE JARS AND BASKET EXCAVATED IN QUARTERS OF TIBETAN FORT, MĪRĀN.

moulded and sand-ground ornamentation of the large fragment of a glass vessel, E. Fort. 0011 (Plate XXXVI), resembles Roman work of the first to fourth centuries A.D. and suggests importation. The abundance of glass at this site, as compared with the Niya ruins, is certainly a notable feature and one for which I am unable at present to suggest a satisfactory explanation. It is all the more noteworthy because we have seen above that the earlier settlement at Endere must belong to a period when the Niya Site was still occupied.

It is left for me to describe the structural remains which on two successive excursions I was able to survey in what may at present be considered the extreme south of the site. The most striking among them was the ruin of a fortified post, small but of massive construction, which Mihmān, my Endere guide, knew by the name of *Yalghuz-oi*, 'the isolated structure'. It proved to be situated just three miles to the south of the Stūpa, amidst closely set tamarisk-cones. These account for the difficulty Prof. Huntington, its first Western visitor, experienced in finding the ruin.[7] It was built in a solid square with walls of stamped clay, about eight feet thick at the base. A projecting rectangular bastion guarded the single entrance from the south, as seen in the photograph, Fig. 82, and the plan (Plate 21). Owing to the protection against erosion which was offered by the situation of the ruin and in particular by the immediate vicinity of the big tamarisk-cone seen on the left in the photograph, the walls had suffered comparatively little damage and still rose to eighteen feet or so in most places. On the outside of the walls the outlines left by forms which were used for stamping the *pisé* (now known as *sighiz* in Turkī) could still be made out, with a length of about three and a height of two feet. Just as in the walls of the ancient walled 'town' near the Stūpa, single courses of bricks or else shapeless clay lumps intervened horizontally between the stamped clay layers. But though clearly visible from a distance in the higher portions of the walls these brick courses were too effaced on the surface for exact measurement in places where access was possible. The top of the north wall and of the bastion bore in parts scanty remains of a parapet about one foot thick and apparently built with bricks of the same width. Ruined post at south end of site.

The interior court, measuring about forty-eight feet square, was completely bare, except for accumulations of straw and dung, mainly of horses, left undisturbed just under the lee side of the east wall. Along this wall the steps leading up to the top from the south-east were still distinguishable. Within the entrance of the court three posts of Toghrak wood, once flanking the inner gate, still stood upright to a height of about eight feet from the original floor. On clearing the débris which filled the gate, we came upon some well-carved pieces of timber which the men from Niya recognized as of mulberry and Elaeagnus wood. So cultivation at the time of this little fort's construction was proved. But I searched in vain for definite archaeological evidence as to the period of its occupation. The solidity of the whole structure gave an impression of antiquity which I felt from the first rather instinctively, without being able to support it. But that this impression had some basis in fact was revealed to me more than half a year later when I surveyed an ancient fort of almost the same plan and appearance, T. XIV (Figs. 183, 184), along the Tun-huang Limes, and ascertained that it marked the position of the Yü-mên Gate of Han times on the early Chinese route from Tun-huang to Lop-nōr. Interior of fortified post.

The structural peculiarity above noticed, of brick courses introduced between the layers of stamped clay, might be adduced to support that impression; for it is seen also in the walls of the ancient 'Sipil' to the north-east of the Stūpa. But I am inclined to attach even more importance to the fact, noticed below, that some small and much-decayed dwellings found in the close vicinity of this fortified post proved to have been built with bricks which showed exactly the same measurements as those of the datable structures E. VI, VII, belonging to the earlier settlement. That the fair Indications of early date of post.

[7] Cf. *Pulse of Asia*, p. 215.

preservation of the walls could not be taken as an indication of late date, was made clear on further reflection by the fact that a big sand-cone covered with living tamarisk on the top (Fig. 82) adjoined the west wall, and rose fully twenty feet above it. Judging from what experience has taught me at other old sites by the southern edge of the Taklamakān, it would appear very difficult to account for the imposing height of thirty-eight feet which this tamarisk-cone has attained above the original ground-level, unless the ruined fort dates back to a period considerably earlier than T'ang times.[8] It must be borne in mind that this accumulation of drift sand could have started only since the surrounding ground had been abandoned to the desert. It is further obvious that the defensive purpose of the structure completely excludes the idea of its having been originally built in the immediate proximity of an already existing sand-cone; for this was bound to impair its safety, as is forcibly demonstrated by the present condition when the summit of the cone has overtopped the fort wall by some twenty feet and, of course, completely commands the interior.

Ancient river-bed south of T'ang fort.

By the combined force of these indications I am led to conclude that this small fort belongs to the earliest remains of the whole site, and that its relatively good preservation must be ascribed to the special protection against wind erosion afforded by the closely set tamarisk-cones which grew up around it after this part of the site had ceased to be occupied. It is probable enough that physical conditions representing initial stages of those now observed, prevailed here already in T'ang times. That the post was erected to afford temporary protection against attacks rather than permanent shelter for a small garrison is suggested by its structural character. But whether it marks the point where the ancient high road of Han times passed the Endere settlement, as I felt tempted to surmise, must remain a mere matter of conjecture. When returning from my first visit to this ruin on November 9 to my camp at the T'ang fort I followed throughout a dry depression which had all the characteristics of an ancient river-bed. As sheet No. 40 of the map shows, this approaches within a mile of the ancient post. It looks like a continuation of the wide bed which branches off from the present Endere river-course near Kök-jigda-öghil, and though now dry supports a luxuriant vegetation of Toghraks, scrub, and reed-beds. To judge from the remains of dead orchards I traced along the left bank of this old river-bed for about a mile south of the T'ang fort, it is likely that it received water down to the time when the fort itself was occupied. But no structural remains could be traced on this ground.

Small ruins south of post.

When the excavation of the last dwelling-places within the T'ang fort was completed on November 12, I moved my camp back to Korgach, higher up the river. I utilized the march there for another visit to the fortified post in the south already described, and for the examination of the scanty remains which Mihmān, the guide from the Endere Tārīm, could show me in its vicinity. A ruin, reached after going about half a mile to the south-south-east, was found to be that of a dwelling hidden away between closely packed tamarisk-cones ten to twenty feet high. Portions of two walls, built of sun-dried bricks and clay, still survived to a height of about seven feet. One running from east to west had a length of about eight feet; the other, standing at a distance of twenty-six feet and at right angles to the former, was a little longer. Between them the mud floors of rooms could be traced below the light cover of sand. The extant walls showed bricks of the same size as found in the ruins of the earlier settlement south of the T'ang fort, viz. 19 by 13 inches, with a thickness of $3\frac{1}{2}$. They were laid, exactly as in the ancient 'Sipil' near the great Stūpa and in the

[8] It has been shown above, p. 199, that in the case of two datable ruined shrines at Khādalik and Farhād-Beg-yailaki, the growth attained by the tamarisk-cones which now partially cover them has been sixteen and eighteen feet respectively since the end of the eighth century A.D. At the Niya Site the maximum height observed in any sand-cone adjoining remains of dwellings was about twenty-five feet, as reckoned from the original ground-level; cf. p. 238, above.

walls of the small fortified post south, in single courses between intervening layers of stamped clay, these layers varying here in thickness from seven to twelve inches. Near the northern wall there were traces of a wall built of timber and wattle.

About a quarter of a mile to the south-west I found the remains of a small dwelling on a plateau rising over a stretch of eroded open ground. Only one little room, measuring eight by ten feet, could still be made out; its wattled walls showed a core of diagonal reed matting and survived to a height of about three feet under the protection of drift sand. There were no finds of any kind at either ruin. Following a small depression northward for about a quarter of a mile, Mihmān took me to a place where human bones lay exposed on the slopes of two 'witnesses'. At the one to the south I found a broken skull and other parts of a skeleton about six feet below the top, and near them two well-preserved earthen pots which, until disclosed by some recent 'prospecting', had evidently rested in the ground. Both were of coarse clay, hand-made, and resembled in shape those subsequently dug up at the Kara-dong site. The larger one measured 11 inches in height to the lip of the high neck, 8 inches in diameter where widest, and 4 inches across at the mouth. Its shoulder was decorated with three bands of incised double lines, separated by a plain zigzag diaper. The neck showed incised wave-lines. Though too rough for approximate dating this ornamentation looked to me distinctly old. The other pot was quite plain, measuring seven inches in height and about as much in diameter.

Ancient burial-place.

No ancient remains of any sort were met with on the march of about five and a half miles westwards which brought us to the grazing-ground of Korgach on the Endere River (Map No. 40). The way lay through an area of closely set tamarisk-cones of moderate height, which became distinctly lower as the present bed was approached. A visit paid from Korgach, on the morning of November 13, to the scanty remains which Mihmān knew of west of the river, completed my archaeological work in this neighbourhood. The 'site' of an old water-mill, which Prof. Huntington appears to have visited,[9] was first traced about half a mile to the north-west of camp, without difficulty, since a shallow *üstang* or canal, about five to six feet broad, helped to show the way. Some roughly carved Toghrak beams and the end of a dug-out trunk which had served for a conduit carrying the water to a point above the wheel, were all that was left of this 'ruin'. Neither their condition nor the appearance of the dry canal pointed to any great age.

Remains of old water-mill.

Mihmān declared that he had not visited the other remains for the last twenty years, and the search for them proved very troublesome and protracted owing to the closeness of the luxuriant tamarisk thickets. In this riverine jungle we first came upon a dry water channel, cut to a depth of about fifteen feet and measuring about twenty feet across (see Map No. 40). It was said to take off a short distance above Korgach, and its general direction to the north-west could be made out with certainty in spite of its many windings. Mihmān told me that he had followed it right through to the abandoned fort-village beyond Bilēl-konghan. He, as well as the other local men with me, took the bed unhesitatingly for that of a canal. The remains, when located at last at a direct distance of about two and a half miles, proved to consist of the badly decayed débris of some dwelling built with Toghraks and showing far-advanced erosion. The clearing was not rewarded by any 'find' which might help to fix the date of the structure. But the discovery of wheat straw embedded in the mud flooring furnished at least clear proof that at the time of occupation the land in the vicinity must have been cultivated.

Remains of dwelling west of Endere R.

[9] See *Pulse of Asia*, p. 217.

SECTION IV.—GENERAL OBSERVATIONS ON ENDERE AND THE 'OLD TU-HUO-LO COUNTRY'

Two periods of occupation of site.

Leaving aside these insignificant remains of undetermined age found west of the river, I may briefly sum up here the main facts brought to light by my renewed survey and excavations as to the history of the ruined area eastwards, which we may comprehensively designate as the Endere Site. We have seen that, as far as extant structural remains are concerned, occupation is definitely proved for the site during two distinct periods. The earlier one is represented for certain by the ruins excavated close to the south of the circular fort first explored in 1901, and by the débris discovered below the rampart of the fort itself. To the same period may also be ascribed with much probability the great Stūpa northward and the circumvallation near it, as well as the fortified post and the traces of ancient dwellings at the southern end of the site. This earlier period may be safely assumed to have extended down to about the time when the Niya Site was abandoned, i. e. down to the end of the third or beginning of the fourth century A. D. To the later period of occupation of the site belongs the circular fort with its small temple E. I containing a graffito of A. D. 718. This period must fall within the T'ang dynasty's effective domination over the Tārīm Basin (*c.* A. D. 660–790), and in all probability nearer to its beginning than its end. It seems in any case likely that this renewed occupation was much shorter and far more restricted also in local extent.

Successive abandonments of site.

I do not propose to discuss here the questions concerning the physical changes which may have caused, or been connected with, the successive abandonments of the site. These questions are substantially the same as have already been considered above in regard to the Niya Site, and, notwithstanding Professor Huntington's ingenious efforts, the available archaeological evidence does not appear to me to furnish critically safe answers with regard to the special circumstances under which those abandonments took place. Only two facts may be considered certain. On the physical side we must accept progressive desiccation as the explanation why during the earlier period a large settlement could exist here such as the present water-supply would no longer be sufficient to maintain. On the historical side we have the clear testimony of Hsüan-tsang, who, when passing the site about A. D. 645, found it completely deserted and its towns ruined wastes.

Hsüan-tsang's 'old *Tu-huo-lo* country'.

The archaeological evidence now brought to light of a settlement abandoned centuries before Hsüan-tsang's passage has once more confirmed our reliance on the great pilgrim's often-proved accuracy in topographical matters, and supplied us with an incontrovertible historical instance of a site in the desert reoccupied after long abandonment. But the definite identification of the Endere ruins with the deserted 'towns' or 'walls'[1] which Hsüan-tsang saw in 'the old Tu-huo-lo country', has a wider historical interest, though for the present only in a negative sense. The fact that the pilgrim mentions this deserted settlement by the same name *Tu-huo-lo* 都貨羅, or *Tukhāra*, which was borne by early conquerors of the Graeco-Bactrian kingdom, and which survived down to mediaeval times as a designation of Badakhshān and adjoining tracts in the Tokhāristān of Muhammadan geographers and historians, has given rise to a great deal of learned speculation and discussion.

Early seats of the Tochari.

It is not my task here to consider the many difficult questions as to the ethnic origin of the Tochari who, as we find in a well-known passage of Strabo (xi. 8. 2), were among the nomadic tribes which wrested Bactria from the Greeks in the second century B. C.; as to the relation between them and the Yüeh-chih; or as to their suggested identity with the Ta-hsia whom the Yüeh-chih

[1] The term used in the *Hsi-yü-chi* is 城 *chêng*, which, as Franke, *Türkvölker*, p. 28, emphasizes, means originally 'wall' or 'rampart' and only in later use 'walled city'.

brought into subjection in Bactria.[2] It is not likely that they will be definitely settled until further researches, perhaps on Bactrian soil itself, have furnished additional materials. Still less do I feel called upon here to investigate the location at different periods of those Tukhāra who have figured in Sanskrit literature since the Mahābhārata, and whose name is certainly identical with that of the classical Tochari in Strabo and Ptolemy and the Tu-huo-lo of the Chinese records. But in the course of the discussions on this subject Hsüan-tsang's mention of the ruins of the 'old Tu-huo-lo country' has been repeatedly treated as if it afforded conclusive proof that the early seats of the Tochari were in this particular locality before their conquest of Bactria.[3] It is this assumption which must be examined here in the light of the newly acquired archaeological evidence.

Endere ruins later than appearance of Tochari on Oxus.

This shows quite clearly that the town walls, etc., which Hsüan-tsang saw in ruins about A.D. 645 at the deserted settlement must have been occupied down to the third or fourth century of our era. It follows that the abandonment of the site could have nothing to do with the supposed emigration of the Tochari from this tract to Bactria some eight centuries before the time of Hsüan-tsang's visit. In view of this it must appear very doubtful whether it is necessary or even justifiable to put upon Hsüan-tsang's brief reference to the 'old Tu-huo-lo country' that interpretation which has been generally presumed in the discussions reviewed in the preceding note, viz. that this was the country

[2] These questions have been discussed more recently and with critical care by Prof. Marquart, *Ērānšahr*, pp. 200 sqq.; Franke, *Türkvölker*, pp. 24 sqq. For a review of earlier opinions and for some observations which still deserve attention, reference is useful to the paper of M. Vasconcellos-Abreu, *De l'origine probable des Toukhares et de leurs migrations à travers l'Asie*, in *Le Muséon* (1883), ii. pp. 165–88.

[3] As far as I can trace the matter in the literature at present accessible to me, Sir Henry Yule appears to have been the first to notice the possible bearing of this passage in Hsüan-tsang's record upon the question of the ethnic origin of the Tochari or Tokhāra. In his masterly *Notes on Hwen Thsang's Account of the Principalities of Tokháristán* (1892), *J.R.A.S.*, N. S., vi. p. 95, he cautiously refers to 'Hwen Thsang, on his journey homewards, using the same name of *Tukhâra* in connexion (as it would seem) with the original seats of the Yuéchi beside the Gobi Desert'.

This early location of the Tukhāra between Niya and Charchan previous to their appearance in the Oxus region became an important argument for Baron von Richthofen; in an elaborate note of his great work, *China* (1877), i. pp. 439 sqq., he endeavoured to demonstrate that the designations of Tukhāra and Yüeh-chih applied to one and the same people which had their original seats east of Khotan. M. Vasconcellos-Abreu, to whom credit is due for having called attention to certain serious difficulties about this theory of the great geographer, appears to have had also critical misgivings as to the probative force of the argument derived from Hsüan-tsang's brief mention of the ruined settlement and as to the exact meaning of the designation, 'old Tu-huo-lo country', which he gives to it; cf. his paper quoted above, *Muséon*, 1883, pp. 167 sqq., especially pp. 175, 185.

Prof. Marquart by a series of ingenious observations endeavours to prove that the Tochari (Tukhāra, Tu-huo-lo) who took Bactria from the last Greek rulers on the Oxus were identical with the Ta-hsia whose territory, as we see from the Former Han Annals, must subsequently have been occupied by the Yüeh-chih some time after 126 B.C.; cf. *Ērānšahr*, pp. 200 sqq. He assumes that these Tochari-Ta-hsia had emigrated into Bactria in the latter half of the second century B.C. from the tract where Hsüan-tsang eight centuries later still found the ruins of 'the old Tu-huo-lo kingdom' abandoned to the desert. Prof. Marquart lays special stress on Hsüan-tsang describing the deserted settlements he saw as 'towns'. He takes this as a proof of the high civilization which he assumes to have been already attained by the Tochari before their movement westwards to the Oxus; cf. *Ērānšahr*, p. 207.

Prof. Franke, who has last discussed these questions with much thoroughness and the special qualifications of a Sinologist, does not accept the identification of the Tochari and Ta-hsia, but assumes that the Tochari, originally seated in Hsüan-tsang's 'old Tu-huo-lo country', attached themselves to the Yüeh-chih when the latter fleeing before the Hsiung-nu or Huns about 170 B.C. passed from their old seats in the extreme north-west of Kan-su to the T'ien-shan region through the Taklamakān; cf. *Türkvölker*, pp. 28 sqq. He believes the Tochari to have been nomadic at the time.

It seems to me impossible to reconcile such a nomadic existence of a large tribe on the desert edge with the physical conditions which during historical times must always have prevailed there more or less as at present. In the same way geographical considerations completely preclude the idea that the migration towards the T'ien-shan of a large nomadic tribe, such as Chang-ch'ien's record shows the great Yüeh-chih to have been before their defeat by the Huns, could have taken place through the Taklamakān or along the southern edge of it. That the Tārīm Basin with its barren wastes of sand or gravel, broken only by a narrow fringe of cultivated oases, was throughout historical times a region utterly unsuited to nomadic migrations is a geographical fact which deserves to be reckoned with in historical speculations more than hitherto has been the case.

formerly inhabited by those very Tu-huo-lo whose extensive territories on the Middle Oxus the pilgrim had previously visited and described.

Hsüan-tsang's use of name *Tu-huo-lo.*

There is nothing in the words used by Hsüan-tsang to imply that the name *Tu-huo-lo* is recorded by him as a quasi-antiquarian designation of the tract. On the contrary, the analogy of the two remaining territories mentioned by him on his progress eastwards implies that he is here giving a name he actually heard from his local guides and informants. After marching six hundred li eastwards, the Hsi-yü-chi tells us, 'he arrived at the old *Chê-mo-t'o-na* country (kingdom), which is precisely the territory of *Chü-mo.* The city walls are very lofty, but there are no inhabitants. Thence he went north-east for about a thousand li and reached the old *Na-fu-po* country (kingdom), which is the same as the territory of *Lou-lan.*'[4] The two 'kingdoms' mentioned here correspond beyond all doubt to the present tracts of Charchan and Lop (south of Lop-nōr), as I shall have occasion to show further on.[5] In each case the expression 'the old Chê-mo-t'o-na (Na-fu-po) country' is followed by the ancient designations of these territories, as recorded for a much earlier period in the Former Han Annals.

Designation heard at site.

This analogy makes it clear that in speaking of 'the old Tu-huo-lo country' in the case of the Endere tract Hsüan-tsang does not wish to convey any special antiquarian information, but only to reproduce the name by which he heard the deserted site designated at the time. The fact that he does not quote here an earlier historical name for the locality is significant. It proves that Hsüan-tsang could trace as little as we can any special mention of the Endere tract in the Chinese historical records of the periods preceding his own. It is very probable that by using the expression 'old country (kingdom)' Hsüan-tsang merely wishes to indicate that none of these three territories between Khotan and Lop-nōr had any longer a chief of its own. It is a question which I must leave to a Sinologist definitely to answer. But what appears to me certain is that, as in the case of the Chê-mo-t'o-na (Charchan) and Na-fu-po (Lop), the name Tu-huo-lo was one taken by Hsüan-tsang from current local use.

Probable origin of Hsüan-tsang's designation.

In the absence of other historical references to the Endere Site any opinion as to the origin and character of the designation heard by Hsüan-tsang must remain purely conjectural. But with this necessary reservation I may give expression here to a surmise which repeated personal experience under conditions rather similar to those of Hsüan-tsang's own passage over this ground has suggested to me. Again and again throughout the Tārīm Basin I have heard ruins of all sorts spoken of, not by particular local names which may or may not be attached to them, but by terms which vaguely associated them with former invaders or rulers of the country. Thus general designations, such as *Kalmak oilar*, 'the Kalmaks' houses', *Kōne-Khitai shahri*, 'township of the Old Khitais (Chinese)', *Kōne-Khitai tam*, 'walls of the Old Chinese', are as common for ancient remains of any period as the 'Kāfir-kōts' and 'Kāfir-kilas' on the Indian North-west Frontier. Popular historical tradition being everywhere in Central Asia very limited in its range, it is only natural that such designations should be borrowed from the latest races whose rule over the country is still remembered.[6] Is it not possible that an answer exactly similar in character to the one which any modern traveller might receive to his question about a ruined site passed *en route* by the desert edge was the basis for the name *Tu-huo-lo* as recorded by Hsüan-tsang at Endere?

Name *Tu-huo-lo* (Tukhāra) applied to Hephthalites and Yüeh-chih.

We know from Chinese historical records and Sung Yün's itinerary that the dominion of the Yeh-ta or Hephthalites, which lasted from about the middle of the fifth century down to

[4] See Julien, *Mémoires*, ii. p. 247; Watters, *Yuan Chwang*, ii. 304; also *Ancient Khotan*, i. p. 435.

[5] See below, pp. 295–6, 321–2.

[6] By the Kalmaks are meant the Oirats, subsequently known as Eleuths or Zungars, whose dominion preceded the last Chinese conquest in the middle of the eighteenth century; cf. Elias and Ross, *Tārīkh-i-Rashīdī*, p. 97.

its destruction by the Western Turks about a century later, extended over a vast region from the borders of Persia to the Tārīm Basin, including also Khotan.[7] It is equally well known that the Hephthalites had their chief seat in Tokhāristān on the Oxus, and that Hsüan-tsang is referring to them and their predecessors in the rule of this region, the Great Yüeh-chih, when he describes the various chiefships in Bactria and Badakhshān as having once formed part of the great kingdom of the Tu-huo-lo or Tukhāra.[8] Moreover the Great Yüeh-chih, on their first occupation of Bactria, must themselves have mixed with its early invaders, the Tochari, so that it is safe to assume that the local designation of Tukhāra had been in current use with them also long before its Chinese equivalent Tu-huo-lo first appears in the Annals of the Wei dynasty (A.D. 386–556).[9]

Influence of 'Tukhāra' in Tārīm Basin.

That the power of these earlier rulers of Tokhāristān had made itself felt in the Tārīm Basin, especially after the weakening of Chinese authority towards the close of the third century A.D., is made highly probable by a variety of considerations. These must be left for discussion elsewhere. Here it will suffice to point out that we have direct indications of this influence in the repeated references which the Chinese records excavated at the Niya and 'Lou-lan' sites make to 'Great Yüeh-chih' people.[10] The ruins of the earlier Endere settlement are, as we have seen, approximately contemporary with these sites, and thus a popular tradition connecting them with Tukhāra predominance might well prove in the end to have had some historical foundation. But even if this approximation in time is treated as a mere matter of chance, it is credible enough that Hsüan-tsang should have heard the name of Tu-huo-lo mentioned in connexion with the ruined settlement by the Endere River. At his time Tukhāra (i. e. Hephthalite) dominion was the latest of those still likely to be remembered by the people. Hence there could be nothing to cause surprise in his guides attaching this name to ruins, the real origin of which had probably been long forgotten.

SECTION V.—LIST OF ANTIQUES FOUND OR EXCAVATED AT ENDERE SITE

OBJECTS FOUND AT ENDERE SITE

E. 001. Pottery fr. from rim of hand-made jar. Ill-levigated clay with white granulations. Evenly fired, surface sand-burned. Orig. diam. *c.* 8″, length $2\frac{1}{2}$″, thickness $\frac{1}{4}$″.

E. 002. Pottery fr. from hand-made vessel. Ill-levigated clay evenly fired to light red. Pattern of incised lines crossed diagonally, contained by two broader horizontal grooves. Gr. M. $2\frac{3}{8}$″, thickness $\frac{1}{4}$″. Pl. XXXVI.

E. 003. Pottery fr. from rim of wheel-made bowl. Light red, poorly refined clay. Turning grooves on outside. Shape recalls that of early Chinese bowls from Han tombs. Orig. diam. *c.* 6″, thickness $\frac{3}{8}$″ to $\frac{1}{4}$″.

E. 004. Pottery fr. from coarse hand-made vase. Dark brick-red clay peculiarly ill-levigated. Hard and evenly fired. Gr. M. 2″, thickness $\frac{1}{2}$″ to $\frac{3}{8}$″.

E. 005. Bronze pendant: solid circle hanging from semicircle. Four attachment holes along serrated top edge. Below two incised circles with centres marked. In lower half three incised concentric circles with centre marked. Strap-end (?) $\frac{3}{16}$″ × $\frac{7}{8}$″. Pl. XXIX.

E. 006. Tapering lead rod bent nearly to form circle. Found 10. xi. 06. Diam. $1\frac{1}{4}$″, thickness $\frac{1}{6}$″ to $\frac{1}{10}$″.

E. 007. Bronze wire bent to semicircle. Found 10. xi. 06. Diam. $\frac{1}{8}$″, tip to tip $\frac{7}{8}$″.

E. 008. Bronze arrow-head with three triangular blades protruding from the shaft at equal angles. Half missing. Found 10. xi. 06. Length $\frac{7}{8}$″. Pl. XXIX.

E. 009. Glass ring, part of, of twisted rods of blue and yellow paste. Found 10. xi. 06. Gr. M. $\frac{5}{8}$″, diam. $\frac{1}{8}$″.

E. 0010. Fr. of glass vessel, yellowish-white, translucent. Outside, three sand-ground, hollow-faced facets. Found 10. xi. 06. Gr. M. 1″, thickness $\frac{1}{10}$″.

[7] Cf. Chavannes, *Voyage de Song Yun*, pp. 24, note 3, and 26; *Turcs occid.*, pp. 222 sqq.; also *Ancient Khotan*, i. p. 171.

[8] Cf. Julien, *Mémoires*, i. p. 23; Watters, *Yuan Chwang*, i. pp. 102.

[9] Cf. Franke, *Türkvölker*, p. 42; Marquart, *Ērānšahr*, pp. 200, 214.

[10] See *Ancient Khotan*, i. p. 372; also below, chap. XI, sec. viii.

E. 0011. Glass appliqué fr., pear-shaped, yellowish-white, translucent, detached from glass vessel. Found 10. xi. 06. Gr. M. $\frac{9}{16}$".

E. 0012. Glass fr. from edge of vessel; amber-coloured, translucent. No orn. Found 10. xi. 06. Gr. M. $\frac{5}{8}$", thickness $\frac{1}{8}$".

E. 0013. Glass fr. from edge of vessel; blown glass, amber-coloured. Found 10. xi. 06. Gr. M. $\frac{5}{8}$", thickness $\frac{1}{12}$".

E. 0014. Fr. of bronze ring. Broadened and flattened for bezel, elsewhere ribbed across. Found 10. xi. 06. $\frac{7}{16}$" × $\frac{1}{8}$" to $\frac{1}{10}$" × $\frac{1}{32}$".

E. 0015. Fr. of white jade ring. Inside circular, outside octagonal. Found 10. xi. 06. $\frac{5}{8}$" × $\frac{1}{10}$ × $\frac{1}{16}$".

E. 0016–0020. Five frs. of bronze rings. Plain, sq. or flat in section. Found 10. xi. 06. Section $\frac{1}{16}$" × $\frac{1}{32}$", lengths from $\frac{1}{2}$" to $\frac{3}{4}$"; orig. diam. *c.* $\frac{3}{4}$".

E. 0021. Hollowed bronze disc pierced in centre. Found 8. or 9. xi. 06. Diam. $1\frac{1}{8}$", thickness $\frac{1}{16}$", h. $\frac{1}{4}$".

E. 0022. Brown paste bead, flattened spheroid. Found 8. or 9. xi. 06. Diam. $\frac{7}{16}$".

E. 0024. Bronze nail, much corroded. Length $\frac{3}{4}$".

E. 0026. Fr. of bronze appliqué plate, prob. from harness. Traces of two rivets. Corroded. Gr. length $\frac{13}{16}$", gr. width $\frac{11}{16}$".

E. 0027. Bronze strap ring, irregularly elliptical. Lozenge-shaped in section. Pin missing. $\frac{15}{16}$" × $\frac{3}{4}$".

E. 0028. Three frs. of plate bronze, one with hole. From appliqué orns. (?). Corroded. Gr. M. $\frac{11}{16}$".

E. 0029, a–c. Bronze frs.: (*a*) binding of dagger-blade, from base of handle. Outer side orn. with cross grooves. Length $\frac{13}{16}$", width $\frac{1}{4}$"; (*b*) and (*c*) two small bronze rings. Outer diam. $\frac{3}{8}$" and $\frac{1}{4}$".

E. 0030. Bronze tang, expanded and corroded. Length $\frac{7}{16}$".

E. 0031. Bronze plate fr. Irregular shape, with incised concentric rings for inlay work. $\frac{1}{2}$" sq.

E. 0032. Bronze rivet with quatrefoil orn. head. Behind, short shank (under $\frac{1}{8}$"), topped by large flat circular stud head of almost same diam. as quatrefoil. Quatrefoil $\frac{13}{16}$" sq. Pl. XXIX.

E. 0033. Fr. of glass rod, moulded and bent, greeny-white glass. Raised ridge along middle; apparently part of floriate handle (?) of vessel. Length 1", diam. $\frac{1}{4}$".

E. 0034. Spherical yellow pebble, unpierced. Diam. $\frac{1}{4}$".

E. 0035. Eight beads: one cylindrical, blue glass with three yellow rings. Rolled from plate and ill-joined, cf. E. Fort. 007. $\frac{1}{2}$" × $\frac{1}{4}$"; one spheroid, white glass gilt. Diam. $\frac{5}{16}$"; one double-spheroid, dark blue paste. Length *c.* $\frac{3}{8}$", gr. diam. $\frac{1}{4}$"; one fr. of yellow paste bugle. Length $\frac{1}{8}$"; one spheroid, red cornelian. Diam. $\frac{5}{16}$"; two spheroid, turquoise blue paste. Diam. *c.* $\frac{3}{16}$" and $\frac{1}{8}$"; one spheroid, dull bluish glass. Diam. $\frac{5}{16}$".

OBJECTS EXCAVATED FROM RUINED DWELLINGS, ENDERE SITE

E. vi. 001. Pierced shale disc. Spinning whorl (?). Diam. $1\frac{1}{8}$", thickness *c.* $\frac{1}{4}$".

E. vi. 002. Lump of crystalline quartz. Gr. M. $\frac{13}{16}$".

E. vi. 003. Strip of buff leather. $2\frac{3}{4}$" × $1\frac{1}{8}$".

E. vi. 004. Bundle of mixed wool. Pink, crimson, yellow, and blue.

E. vi. 005. Pouch of buff felt, one piece folded and sewn. $4\frac{1}{2}$" × $2\frac{7}{8}$".

E. vi. 006. Pad of buff felt, made of two pieces; the thinner folded on both sides of, and sewn to, the thicker. $2\frac{7}{8}$" × $3\frac{3}{8}$".

E. vi. 007. Strip of thin buff leather, irregular shape. Gr. M. $6\frac{1}{4}$".

E. vi. 008. Strip of buff leather. $2\frac{3}{8}$" × 1".

E. vi. 009. (Sadak's find.) **Irregular oblong tablet.** *Obv.* two columns (9 and 3 ll.) Khar., faded. *Rev.* Khar. words scribbled at random, writing clear. Well preserved. $9\frac{1}{8}$" × $4\frac{1}{2}$" × $\frac{5}{16}$".

E. vi. 0010. a–c. Two fire-sticks (*a* and *b*), female (cf. L. A. v. ii. 1), in a canvas bag (*c*):—(*a*) has six hearths along one side, and a hole bored into one end, to join which hole a second is pierced from side opposite to hearths. One side split off. $5\frac{3}{8}$" × $1\frac{1}{8}$" × $\frac{7}{8}$"; (*b*) like (*a*) exactly, but has five hearths finished and two begun. 6" × $1\frac{1}{2}$" × $\frac{7}{8}$"; (*c*) narrow bag of canvas with pointed end; several folds thick; roughly stitched. $6\frac{1}{2}$" × $2\frac{1}{2}$" to 2" diam. Cf. Joyce in *Man.* xi. 3. 24. Pl. XXVIII.

E. vi. 0012. Cowrie shell with back cut or worn off for threading. Length $\frac{15}{16}$".

E. vi. 0013. Glass fr. from edge of vessel; cloudy yellow, edge rounded. On outer surface part of an oval ground hollow. Gr. M. $1\frac{3}{16}$", thickness $\frac{1}{10}$" to $\frac{1}{30}$"; orig. diam. *c.* 3".

E. vi. 0014. a–c. Three beads: (*a*) double spheroid of pale blue opaque glass. Diam. $\frac{1}{4}$"; (*b*) spheroid of blue translucent glass. Diam. $\frac{3}{16}$"; (*c*) flattened spheroid of gilt glass. Cf. E. Fort. 007. Diam. $\frac{3}{10}$".

E. vi. 0015. Pottery fr. from vase. Clay hard and pink. Slightly lustrous grass-green glaze on both sides, almost eroded away outside. Gr. M. 1", thickness $\frac{3}{16}$".

E. vi. 0016. Pointed strip of yellow felt. $9\frac{3}{4}$" × $1\frac{7}{8}$" (max.).

E. vi. i. 2. Half of wooden slip label pierced at pointed end. Blank. Weathered. $4'' \times \frac{7}{8}'' \times \frac{1}{8}''$.

E. vi. i. 001. Wheat grains from bag found in corner of E. vi. i, 4′ above orig. floor.

E. vi. ii. 1. Oblong tablet, ends roughly cut. *Obv.* 9 ll. Khar., clear, black, regular handwriting covering $\frac{2}{3}$ of surface. *Rev.* scattered Khar. chars. in one corner. Very good condition. $8\frac{3}{8}'' \times 4'' \times \frac{3}{8}''$. Pl. XXXVIII.

E. vi. ii. 2. Rude wooden disc with five holes through centre, cut from an inscribed tablet. *Obv.* 5 ll. Khar. fairly plain, fragmentary. *Rev.* blank. Well preserved. Diam. $3\frac{1}{4}''$.

E. vi. iii. 1. Strip of bark inscribed on inside with unknown script. Tila and Kāsim Ākhūn take the bark for that of Kik-tal, a jungle tree. $5\frac{1}{4}'' \times 1'' \times \frac{1}{8}''$.

E. vi. iii. 2. Fr. of slip tablet. *Obv.* faint traces of Khar. *Rev.* blank. Hard and well preserved. $2\frac{7}{8}'' \times \frac{5}{8}''$.

E. vi. iv. 1. Fr. of rectang. under-tablet, blank. Well preserved. $3\frac{3}{8}'' \times 1\frac{1}{16}'' \times \frac{3}{16}''$ to $\frac{7}{16}''$.

E. vii. 001. Pottery fr. from wall of hand-made vase. Clay a light reddish brown. On outside rich blue-green glaze. Decoration apparently a series of concentric curves marked with the finger or some blunt instrument. Prob. Chinese. Gr. M. $3\frac{3}{4}''$, thickness $\frac{5}{16}''$ to $\frac{3}{16}''$. Pl. XXXVI.

E. vii. 002. Lathe-turned wooden bowl with carinated walls and flat base. H. $2\frac{1}{8}''$, diam. $6\frac{1}{4}''$. Pl. XXVIII.

E. vii. i. 1. Rectang. under-tablet, one side and one end lost. *Obv.* four ll. Khar., partly defaced. *Rev.* blank. Discoloured. $7\frac{3}{8}'' \times 1\frac{7}{16}''$.

E. vii. i. 2. Fr. of rectang. cov.-tablet. *Obv.* on one side of seal cav. four ll. Khar.; on other, traces of Khar. *Rev.* two ll. Khar. incomplete. Soft, much broken and in poor condition. $4\frac{7}{8}'' \times 1\frac{1}{4}''$.

E. vii. ii. 001. a–b. Fabric frs.: (*a*) piece of buff silk fabric, fine plain weave. $2\frac{3}{8}'' \times \frac{5}{8}''$; (*b*) tangle of dark blue silk thread. Found 9. xi. 06.

OBJECTS EXCAVATED FROM, OR FOUND NEAR, ENDERE FORT

E. Fort. 001. a. Leather document from rubbish-heap. Folded lengthways in four. On outside one l. Khar. faint, inside nine ll. Khar. $4\frac{1}{2}'' \times 3\frac{3}{8}''$ (unfolded). Pl. XXXVIII.

E. Fort. 001. b. Pottery fr. from hand-made vessel. Very ill-levigated clay, fired on an open hearth (?). Black-grey. Found at foot of rampart, 9. xi. 06. Gr. M. $2\frac{5}{8}''$, thickness $\frac{5}{16}''$ to $\frac{1}{4}''$.

E. Fort. 001. c. Bone knife handle. In section a flat oval. Narrow slit to take blade. In other end, hole $\frac{1}{4}'' \times \frac{1}{8}'' \times \frac{1}{2}''$ deep. Cf. N. xxvi. vi. 002. Found W. of gate, 10. xi. 06. $4\frac{1}{4}'' \times \frac{7}{8}'' \times \frac{7}{16}''$. Pl. XXVIII.

E. Fort. 002. Rude bone disc with rounded edges. Pierced in centre with hole less than $\frac{1}{16}''$ diam., in which are remains of wooden peg (?). Found W. of gate, 10. xi. 06. Diam. $\frac{7}{8}''$, thickness $\frac{7}{16}''$.

E. Fort. 003. Fr. of blown-glass vessel, cloudy yellow-green. Two raised diverging bars on convex side—applied slip-work. This orn. in applied thread was particularly common in Europe in the 3rd century A.D. and later. Found W. of Fort, 9. xi. 06. $1'' \times \frac{5}{8}'' \times \frac{1}{10}''$. Pl. XXIX.

E. Fort. 004. Fr. of blown-glass vessel, translucent yellow. On it part of raised (moulded) oval medallion having hollow-ground face and sand-ground rayed border. Found W. of Fort, 9. xi. 06. $1\frac{3}{8}'' \times 1\frac{1}{8}'' \times \frac{3}{16}''$ to $\frac{1}{10}''$.

E. Fort. 005. Fr. of glass vessel, yellowish-white. Two shallow channels on outer surface. Found W. of Fort, 9. xi. 06. $\frac{15}{16}'' \times \frac{3}{4}'' \times \frac{1}{8}''$.

E. Fort. 006. a–c. Misc. small orns.: (*a*) spherical bead of red cornelian. Diam. $\frac{7}{16}''$; (*b*) ring bead of yellow glass. Diam. $\frac{1}{4}''$; (*c*) ring of plate bronze. Diam. $\frac{3}{8}''$. Found W. of Fort, 9. xi. 06.

E. Fort. 007. Fr. of glass bead, flattened cylindrical, coarsely made of translucent yellowish-white glass, gold plated and overlaid with a clumsy film of transparent glass to protect gilding; cf. E. vi. 0014, etc. Cf. A. Kisa, *Das Glas im Altertume*, p. 834–5; Woolley and MacIver, *Karanog*, p. 76. These gilt beads must be imported from the West, prob. from Western Asia, or from the Nile Valley (?). Found W. of Fort, 9. xi. 06. $\frac{1}{2}'' \times$ diam. $\frac{3}{8}''$.

E. Fort. 008. Fr. of sheet bronze, irregular shape. Found W. of Fort, 9. xi. 06. Gr. M. $\frac{7}{8}''$, thickness $\frac{1}{32}''$.

E. Fort. 009. Ring bead of brown glass, half of. Found W. of Fort, 9. xi. 06. Diam. $\frac{3}{8}''$.

E. Fort. 0010. Sq. lignite seal with round pierced handle (broken). Intaglio design. On L. fig. seated R. on rocks (?) or stool; big cap or turban on head, leans forward with both arms outspread towards tall central obj., possibly a tree. On R. another fig. apparently squatting cross-legged on low stool, L., hands clasped before chest; big head-dress of four plumes, three upright and one curling back over shoulders. Indistinct, cracked and much weathered. $\frac{3}{4}''$ high, impression $\frac{13}{16}''$ sq. Found by Hassan Ākhūn, 8. xi. 06. Pl. XXIX.

E. Fort. 0011. (Post S. of Endere Fort.) **Glass fr.** from wall of vessel decorated with moulded and sand-ground orn. (?). In middle, relief band orn. with vertical incisions. Above, within curved outline, hollow-ground ovals, prob. rough lotus-petal design; below, similar design on larger scale, with tangent lines, for sepals (?). Resembles Roman work of 1st–4th centuries A.D. Cf. A. Kisa, *Das Glas im*

Altertume, pp. 123, 125. Greenish-white glass. $2\frac{1}{4}'' \times 2''$, thickness $\frac{3}{16}''$ to $\frac{1}{8}''$, orig. diam. *c*. 3″. Pl. XXXVI.

E. Fort. 0012. Frs. of woollen fabric, dark blue. Various weaves: Plain cloth, plain corded; plain twill; fancy twill forming lozenge pattern, sewn in places with hemp (?) thread. Also pieces of loose buff woollen thread; and frs. of similar undyed fabric. All very perished. Found W. of gate, 10. xi. 06. Analysed by Dr. Hanausek. Gr. length $13\frac{1}{2}''$.

E. Fort. 0013. Frs. of brown woollen fabric. Remains of sewing with hemp (?) thread. Fr. of blue silk attached to piece of brown fabric. Plain weave, but weft thicker than warp. Found W. of gate, 10. xi. 06. Analysed by Dr. Hanausek. Gr. length 13″.

E. Fort. 0014. Four frs. of coarse woollen braid, red, attached to buff felt. Found W. of gate, 10. xi. 06. Analysed by Dr. Hanausek. Gr. length 27″.

E. Fort. 0015. Fabric frs. Three of fine buff silk, one with lozenge damask pattern; two, blue silk; one, silk yarn waste, bound round into cord by crimson silk fabric. Found W. of gate, 10. xi. 06. Gr. M. 6″.

E. Fort. 0016. Fr. of buff woollen (?) fabric, plain weave, much decayed. Found W. of gate, 10. xi. 06. Length *c*. 8″.

E. Fort. 0017. Fr. of flat cord made of two plaits of hair string, fastened side by side by string stitching. Found W. of gate, 10. xi. 06. $5'' \times \frac{3}{4}'' \times \frac{1}{4}''$.

E. Fort. 0018. Bundle of mixed rags, including braid, *darri*, small frs. of blue silk, and loose yarn. 'All the fabrics are of silk or wool, and contain no vegetable fibre.' Found at foot of rampart, 9. xi. 06. Analysed by Dr. Hanausek. Gr. M. 9″.

E. Fort. 0019. Oval bronze bezel of ring. Intaglio design, indistinct. $\frac{11}{16}'' \times \frac{9}{16}''$.

E. Fort. 0020. Pottery fr. from vase of grey, comparatively fine, clay, fired hard, covered each side with dull mottled green glaze. Gr. M. $1\frac{1}{4}''$, thickness $\frac{3}{8}''$.

E. Fort. 0021. Fr. of blown-glass vessel, translucent yellowish-white, with design in relief slip-work. Gr. M. $\frac{7}{8}''$, thickness $\frac{1}{12}''$.

E. Fort. 0022. Bronze shield-shaped plate with three pin-holes. Two broken projections on straight edge. Tongue of belt. $1\frac{1}{2}'' \times 1\frac{3}{8}'' \times \frac{1}{16}''$. Pl. XXIX.

E. Fort. 0023. Fr. of hollow bronze object, apparently a bell with projecting ring at top. Three small holes, prob. for clapper attachment. $1\frac{1}{2}'' \times \frac{7}{8}''$. Pl. XXIX.

E. Fort. 0024. Bronze disc. Smoothed on one side only, and pierced in centre. Diam. $\frac{1}{2}''$, thickness $\frac{1}{16}''$.

E. Fort. 0025. Bronze stud with hemispherical gilt cap and plain pin. Diam. $\frac{1}{4}''$.

E. Fort. 0026. a–b. Fabric frs.: (*a*) coarse woollen fabric, dull carmine, loose irregular weave. $4'' \times 2\frac{1}{2}''$; (*b*) buff silk, fine corded weave. $6\frac{1}{2}'' \times 3''$.

E. Fort. 0027. a–d. Four beads: (*a*) cylindrical, blue glass. $\frac{3}{8}'' \times \frac{1}{8}''$; (*b*) ring, yellow glass. $\frac{1}{8}'' \times \frac{1}{4}''$; (*c*) shapeless, red cornelian. $\frac{3}{16}'' \times \frac{1}{8}''$; (*d*) cylindrical, green paste. $\frac{3}{16}'' \times \frac{1}{8}''$.

OBJECTS FOUND NEAR ENDERE STŪPA

E. Stūpa. 001. Glass fr., cloudy, pale yellow-green. On outside raised bar, applied slip. Gr. M. $1\frac{3}{8}''$, thickness $\frac{1}{10}''$.

E. Stūpa. 002. Fr. of blown-glass vessel, cloudy, pale green. Raised bar on outside, applied slip. Gr. M. $\frac{13}{16}''$, thickness $\frac{1}{8}''$; orig. diam. *c*. $1\frac{1}{2}''$.

E. Stūpa. 003. Glass fr., dark blue, cloudy, fused. $\frac{7}{8}'' \times \frac{1}{2}'' \times \frac{1}{8}''$.

E. Stūpa. 004. Bead, cylindrical, blue glass. Length $\frac{5}{16}''$, diam. $\frac{3}{16}''$.

E. Stūpa. 005. Bronze buckle ring, semicircular; pin missing. Base $\frac{5}{8}''$, h. from base $\frac{1}{2}''$.

E. Stūpa. 006. Bead, fr. of, green glass, spherical. Gr. M. $\frac{5}{16}''$.

E. Stūpa. 007. Bronze 'grelot' bell, complete. Cf. *Ancient Khot.*, ii. Pl. LXXIV, N. 0012. a. Found 10. xi. 06. Diam. $\frac{11}{16}'' \times \frac{1}{2}''$. Pl. XXIX.

E. Stūpa. 008. Bronze bell, like E. Stupa. 007. Complete. Found 10. xi. 06. Diam. $\frac{1}{2}'' \times \frac{7}{16}''$. Pl. XXIX.

E. Stūpa. 0010. Ring of bronze wire, the two ends overlapping. Round each end is wound a second piece of wire, the end coiled in a spiral on the outside, the spirals side by side. Found 10. xi. 06. Diam. $\frac{3}{4}''$, thickness $\frac{1}{16}''$. Pl. XXIX.

E. Stūpa. 0011. Bead, discoid, blue glass. Found 10. xi. 06. Diam. $\frac{1}{4}''$.

E. Stūpa. 0012. Terracotta ring-handle from vessel; broken off and broken surface ground flat and smooth. Found 8. xi. 06. Diam. inside $\frac{11}{16}'' \times \frac{13}{16}''$, outside $1\frac{1}{8}'' \times \frac{7}{8}''$; width $\frac{3}{4}''$ to $1\frac{1}{8}''$.

CHAPTER VIII

FROM CHARCHAN TO CHARKHLIK

Section I.—EARLY ACCOUNTS OF CHARCHAN

THE journey from the Endere River to Charchan was covered in six marches, between November 16 and 20, the same number as in Hsüan-tsang's itinerary. The route, described already in my personal narrative,[1] can have changed but little since his time, lying in an almost straight line to the north-east. It carefully hugs the line where the glacis of the sterile 'Sai' of gravel, sloping down from the foot of the K'un-lun and overrun in parts by high ridges of sand, is fringed northward by a zone of desert vegetation, varying in width and as yet unsurveyed (see Maps Nos. 43, 46). Journey from Endere to Charchan.

For direct archaeological observations there was no scope here. But I was able to convince myself here also of the truthfulness of the record which Hsüan-tsang has left of the impressions gathered on his journey eastwards to Lop-nōr.[2] On leaving the territory of Ni-jang or Niya 'he took the direction to the east and entered a great desert of moving sands. These sands have an immense extent; they are piled up or scattered according to the wind. As there are no tracks for wayfarers, many go astray. On every side there extends a vast space, with nothing to go by. So travellers collect the bones of animals left behind to serve as road-marks. There is neither water nor grazing, and hot winds frequently blow. When these winds rise, men and animals lose their senses and become unwell. Often one hears singing and whistling, and sometimes wailing. While looking and listening, one becomes stupified and unable to direct oneself. Hence travellers frequently lose their lives here. The phenomena are caused by demons and sprites.' We shall see how curiously the facts and superstitions here described reappear in Marco Polo's account of the great desert crossed between Lop-nōr and Sha-chou.[3] No doubt, the pilgrim's remarks were meant to apply generally to the desert route as he saw it on his way from Niya to the Lop tract and hence to Sha-chou or Tun-huang. Hsüan-tsang's description of route.

For the period immediately following Hsüan-tsang's journey, a succinct account of this route is contained in the itinerary which the T'ang Annals furnish from Sha-chou to Khotan, and of which M. Chavannes has translated an abstract.[4] We are told there that after leaving 'the garrison of Po-hsien, which is the ancient town of Chü-mo' and, as we shall presently see, identical with the modern Charchan, 'one passes the *Hsi-li-chih* wells, the *Yao* wells, the river *Wu-chê*, and, after 500 li, arrives at the military post of the town of *Lan*, which is east of Yü-t'ien'. By the latter expression we may assume that the eastern frontier of Khotan territory is meant, and in this case the distance indicated would justify us in identifying 'the military post of the town of Lan' 蘭 with the T'ang fort of the Endere Site first explored in 1901. The mention of wells as stages west Itinerary of T'ang Annals.

[1] See *Desert Cathay*, i. pp. 317 sqq.

[2] See Julien, *Mémoires*, ii. p. 246; Watters, *Yuan Chwang*, ii. p. 304. I reproduce the latter translation, except where Julien's version seems to give a better context.

[3] Cf. Yule, *Marco Polo*, i. pp. 196 sq., with the illuminating notes of Sir Henry Yule on the widespread belief in goblins haunting deserts, *ibid.*, pp. 201 sq.

[4] See Chavannes, *Voyage de Song Yun*, p. 12, note 9; also cf. *Ancient Khotan*, i. p. 436, note 14.

of Chü-mo is a clear indication that the ground traversed by the route between Charchan and the Endere Site had still remained without permanent habitations after the establishment of Chinese control, but, as now, offered water in wells dug at regular halting stages. In the absence of direct evidence, such as distance estimates would supply, conjectural identifications of the stages recorded in the T'ang itineraries would serve no useful purpose. So much, however, is clear that by the *Wu-chê* River 勿遮水 either the Kara-muran or Mölcha River must be meant, the beds of which, dry except during the summer floods, are passed near the halting-places of Chingelik and Shūdan-öghil respectively (see Map No. 43).

Marco Polo's description of route.

Marco Polo's description of this route is somewhat fuller than Hsüan-tsang's, and brings out more clearly the distinctive features of its main stages.[5] In his account of the 'Province of Charchan', to which we shall have to return presently, he tells us: 'The whole of the Province is sandy, and so is the road all the way from Pein, and much of the water that you find is bitter and bad. However, at some places you do find fresh and sweet water. When an army passes through the land, the people escape with their wives, children, and cattle a distance of two or three days' journey into the sandy waste; and knowing the spots where water is to be had, they are able to live there, and to keep their cattle alive, whilst it is impossible to discover them; for the wind immediately blows the sand over their track.'

Desert route between Niya and Charchan.

It is easy to recognize here a faithful recollection of the route as it still presents itself to the traveller between the oases of Niya and Charchan.[6] Whereas fresh water is obtainable on the Yār-tungaz and Endere Rivers and at the usual halting-places as far as the Yār-tungaz, the water at the wells beyond is throughout brackish, and at some points so salt as to be scarcely fit for drinking. This, coupled with the great summer heat, the mosquitoes then bred in the flood-beds, and the serious risks arising from 'Burāns' or sand-storms, practically closes the direct route through the desert from May till September. It is equally certain that at that season the terminal forest-belts of the rivers and the extensive areas of sandy scrub and jungle, which spread out northward near the lakes of Bileklik and Sizütke and for two marches east of the Endere River, would provide safe places of refuge for the flocks and the families of the shepherds who subsist on these dreary pastures.

Oasis of Charchan.

Though the combined claims of practical travel arrangements and archaeological remains did not suffice to detain me at Charchan for more than two busy days, November 21 and 22, yet there was much to interest me in this small and flourishing oasis both from the geographical and from the antiquarian point of view. Already on the march I had gathered information which showed that Charchan was no longer the wretched collection of hovels such as it was described some thirty years earlier, but a steadily growing oasis.[7] From a dreaded place of exile, used by the Chinese in pre-rebellion days as a settlement for malefactors from Khotan, it had gradually developed into a lively oasis quite as large as, if not larger than, Niya. Referring for details of local observations to my personal narrative,[8] I may content myself here with a rapid survey of the factors which have had a manifest bearing on the history of the place.

Abundant water-supply in Charchan R.

Brief as my stay at Charchan was, it amply sufficed to impress me with the advantages which physical conditions here offer for the growth of a large and important settlement. Chief among them is the abundant water-supply assured by the Charchan River. This drains a series of high snowy ranges to the south beyond the outermost chain of the K'un-lun, and brings down thence so

[5] Cf. Yule, *Marco Polo*, i. p. 194.

[6] Cf. for the route between Niya and Endere as seen by me in 1901, *Ruins of Khotan*, pp. 423 sqq.; *Ancient Khotan*, i. pp. 443 sq.

[7] Cf. Prejevalsky, *From Kulja to Lob-nor*, p. 76, note 2; Forsyth, *Yarkand Mission Report*, p. 34.

[8] Cf. *Desert Cathay*, i. pp. 321 sqq.

great a volume of water that, alone among the rivers which descend from the mountains east of the Khotan River, it can at all seasons force its way right through the desert until it joins the Tārīm. All my informants agreed that the possibilities of irrigation in this area were more than sufficient for an oasis quite as big as Keriya. Of this I had ocular evidence when crossing the river within the oasis. I found the bed here fully half a mile broad and the river still flowing, in spite of the late season, with a strong current in five or six well-filled channels, from ten to twenty yards broad. Its volume was certainly far in excess of that of the Yurung-kāsh or Khotan River, as I had seen it about two months before or in October and November of 1900.

Possible development of Charchan oasis.

Of arable land there was abundance on both banks of the river, more than any colonization scheme, however extravagant, would require; for apart from the broad belts of potentially fertile steppe, now covered with reed and scrub, north of the present oasis, it is certain that a few years of systematic irrigation would suffice to deposit again a layer of fertile riverine loess over the wide stretches of fine denuded gravel south of the oasis where 'Tatis' attest the existence of extensive ancient settlements.[9] Nothing was wanting but fresh settlers, and for these all the land-holding 'Bais' of Charchan were eagerly longing. The influx of labourers from the Khotan side was steady but slow. The long desert route manifestly acted as a deterrent. Nothing had been done to mitigate the hardships it would necessarily imply for poor cultivators, and of the large batches of colonists, brought on several occasions by official pressure, numbers had escaped again to rejoin their relatives, etc., at the more populous centres westwards. The demand for labour there was still great enough to assure an easy existence even for the poorest.

Difficulties of colonization.

Charchan is separated from the nearest permanent settlements of importance by greater distances than any other oasis within the plains of the Tārīm Basin. This geographical fact and the economic conditions resulting account for the special difficulties with which colonization has to contend here in spite of the advantages offered by abundant irrigation facilities. At the same time the geographical position of Charchan, about half-way between Niya and the small area of cultivation in the Lop-nōr tract, was enough to ensure importance to the oasis at any period when the route south of the great desert saw much traffic. In the interaction of these causes we may find, I think, the best explanation of the fact that the history of Charchan offers a particularly striking illustration of those *péripéties* to which isolated settlements along the southern edge of the great Turkestān desert have been subject at different periods. These repeated alternations between agricultural occupation and abandonment to the desert, which the history of Charchan shows us must have a special interest for the geographical as well as the historical student. They are fully authenticated by reliable dated records, and, in view of the facts already mentioned about the water-supply of the Charchan River, cannot reasonably be attributed to the sole agency of physical changes brought about by desiccation.

Charchan in Former Han Annals.

The earliest record of Charchan is furnished by the Former Han Annals, which mention it by the name of Chü-mo 且末 as a territory situated on the high road leading westwards from Shan-shan or the Lop-nōr tract.[10] The distance of 720 li given from Shan-shan and the bearing westwards make this identification certain.[11] In agreement also is the statement that the territory

[9] I may note here in passing that I observed this process of reclamation vigorously proceeding on exactly similar 'Sai' in widely distinct localities, e. g. to the north of Kuchā and along the southern edge of the Yurung-kāsh, Sampula, and Borazān cantons of Khotan.

[10] For a translation of the notice of the Former Han Annals, cf. Wylie, *J. Anthrop. Inst.*, x. p. 28; cf. also Chavannes, *T'oung-pao*, 1905, p. 536.

[11] This identification appears to have been first suggested by Mr. Kingsmill; see Wylie, *J. Anthrop. Inst.*, x. p. 23, quoting from the *Chinese Recorder*, vii. p. 341. It was definitely proved in a critical fashion by M. Grenard; see *Mission D. de Rhins*, iii. p. 146, where the references to Charchan in Sung Yun's and Hsüan-tsang's itineraries are also duly noticed.

of Ching-chüeh, located above on the Niya River, lies to the west of Chü-mo, though the distance shown as 2,000 li is grossly exaggerated.[12] Chü-mo, with its capital of the same name, is described as a petty 'kingdom', containing '230 families, comprising 1,610 persons, with 320 trained soldiers, a Guardian Marquis, a Right General, a Left General, and an Interpreter-in-chief. The city is distant from the seat of the Governor-General on the north-west 2,258 li. The country joins Hwuy-le on the north, and it is about three days' journey to the kingdom of Little Wan on the south. Grapes and other fruits are produced. The kingdom of Tsing-tseuĕ (Ching-chüeh) on the west is 2,000 li distant.'

Neighbouring territory of *Hsiao-yüan.*

By Hwuy-le, i.e. Wu-lei 烏壘, is meant the vicinity of Chādir, between Korla and Kuchā, on the great route north of the Tārīm, which served under the Former Han dynasty as headquarters for the Protector-General of the Western Regions.[13] A reference to the map shows that the bearing here recorded is accurate enough, Charchan being situated in 85° 35′ long. according to our surveys (see Map No. 46), while Dr. Hassenstein's map places Chādir in *circ.* 84° 50′.[14] As to the still smaller 'kingdom of Little Wan' or *Hsiao-yüan*, which lay about three days' journey to the south of Chü-mo, and of which a brief account is given in the succeeding notice of the *Hsi yü chuan*, it is certain that it must be identified with the small settlements of cultivators and herdsmen which are scattered along the foot of the K'un-lun south and south-west of Charchan, from Achchan to the debouchure of the Mölcha and Endere Rivers (see Maps Nos. 43, 47). To judge from the distance indicated, the 'capital' of this tract, the 'city' of Yü-ling, may be placed about Dālai-kurghān, as suggested by Dr. Herrmann.[15] The population recorded for *Hsiao-yüan*, 150 families, throws light on the modest resources of this hill tract. It is correctly described as 'lying out of the way of the high road' and adjoining on the east the territory of the nomadic Jo Ch'iang, who held the high plateaus south of the Āltin-tāgh, including Tsaidam.

Charchan in later Annals.

The annals of the Later Han duly mention Chü-mo 且末 in its proper place between the territories of Shan-shan and Ching-chüeh, on the great southern route from Yü-mên to Khotan.[16] Also the *Wei lio* (composed A. D. 239–265) notes it, along with Hsiao-yüan and Ching-chüeh, among the territories dependent on Shan-shan.[17] No details are furnished by these records, nor does Charchan appear otherwise to receive any special notice in the Annals of the dynasties which intervened between the Han and T'ang periods.

Calmadana in Niya Kharoṣṭhī tablet.

But we have direct and authentic evidence that Charchan was still inhabited and probably a separate chiefship towards the end of the third century A. D. in the Chinese tablet from the Niya Site, N. XIV. iii. 10, which mentions a present offered to a Royal consort from Chü-mo.[18] There is also reason to believe that Charchan is meant by *Calmadana*, mentioned in a Kharoṣṭhī tablet from the same site as the locality from which a messenger is dispatched to *Khotana*, i. e. Khotan,

[12] See above, pp. 219 sq.; cf. also Hermann, *Seidenstrassen*, p. 99, where an endeavour is made to account for this palpable exaggeration. Seeing that the position of Chü-mo and Ching-chüeh are quite certain, this great error in distance serves as a warning against placing too great reliance on the distance estimates in the Han Annals' survey of the Western Regions.

[13] Cf. Wylie, *J. Anthrop. Inst.*, xi. p. 95; Herrmann, *Seidenstrassen*, pp. 38, 86. See also below, Chap. xxx, sec. ii, note 8.

[14] I must leave it undecided how this bearing to the *north* of Chü-mo is to be reconciled with the statement immediately preceding about the seat of the Governor-General, i.e. Wu-lei, being to the north-west. Considering the vast distance, almost all impassable desert, which in the direct line separates Charchan from the small oasis north of the Taklamakān, either location is sufficiently correct and suggests the use of some map by the compiler of the 'Notes on the Western Regions'.

[15] See Herrmann, *Seidenstrassen*, p. 99.

[16] Cf. Chavannes, *T'oung-pao*, 1907, p. 170.

[17] See *ibid.*, 1905, pp. 535 sqq. The *Wei lio* by a graphic error shows the name as 且志 *Chü-chih* instead of 且末.

[18] See above, p. 218; Chavannes, *Documents*, p. 203.

via *Saca* and *Nina*, i. e. Niya ; [19] for it is probably this full form of the local name *Calmadana* which Hsüan-tsang's transcript *Chê-mo-t'o-na* is intended to reproduce.[20]

Charchan noticed by Li Tao-yüan.

Interesting geographical information regarding the territory and its river is furnished at a somewhat later period by a commentary on the *Shui ching*, 'the Classic of the Waters', from which M. Chavannes' translation has made important extracts accessible.[21] Li Tao-yüan, the author of this commentary, died in A. D. 527; but various observations prove that his remarks concerning the Tārīm Basin are largely based on earlier materials. We shall have occasion further on to consider his statement concerning the lowest course of the Tārīm and the marshes of Lop-nōr.[22] After discussing the course of the Khotan River and its junction with the Tārīm, the commentary informs us that the river, 'going further east, passes north of the territory of *Chü-mo* 且末; still further eastward it receives on its right the great *A-nou-ta* 阿耨達 river (i. e. the Charchan River). To this river also the *Shih shih hsi yü chi* is referring when it says : "To the north-west of the A-nou-ta mountains there is a great river which flows northward and throws itself into the *Lao-lan* Lake (Lop-nōr)." This river flows northward; it cuts through the mountains which are to the south of Chü-mo; further north it passes to the west of the walled town (*ch'êng*) of Chü-mo.' Then follow some remarks on the latter which are manifestly based upon the *Hsi yü chuan* of the Former Han Annals, if not literally taken from it.[23] 'This kingdom [of Chü-mo] has for its capital the town of Chü-mo, which, towards the west, communicates with [the kingdom of] *Ching-chüeh* at 2,000 li distance, and which, towards the east, is 720 li from *Shan-shan*. The five kinds of cereals are there cultivated; the customs are approximately the same as in China.'

Course of Charchan R. described.

The notice concludes with an account of the further course of the A-nou-ta River. 'From here onward it is called "the river of Chü-mo". Flowing towards the north-east, it passes to the north of Chü-mo. Flowing still further, it unites itself on its left with the River of the South (i. e. with the Khotan River merged in the Tārīm). Together [the two rivers] flow in an oblique course towards the east, and, having joined, become the *Chu-pin* 注賓 River. The Chu-pin River further east passes north of the kingdom of Shan-shan.'

A reference to the map will show how correctly the chief topographical facts about the river of Charchan are delineated by the Chinese commentator. South of Charchan it breaks through the northernmost chain of the K'un-lun, to which in its eastern extension the name *A-nou-ta* applies. Its course from the debouchure as far as the Charchan oasis and its subsequent deflexion to the north-east are accurately stated. So is also the easterly direction assumed by the river near its junction with the Tārīm and beyond, until its waters are lost in the Kara-koshun marshes of Lop-nōr. The exactness of these details creates a strong presumption of the correctness also of the statement which makes the river pass to the west of the old town, though its course now lies through the existing oasis. To this point we shall return presently.

Sung Yün's account of Charchan.

A somewhat more detailed account of Charchan is contained in the itinerary of Sung Yün.[24] This Buddhist pilgrim passed here about A. D. 519 along the southern route on his way from China to Khotan: 'Having marched sixteen hundred and forty li westward after leaving Shan-shan, [the travellers] arrived at the walled town (*ch'êng*) of *Tso-mo* 左末. In this town there reside about a hundred families. In this region it does not rain. Irrigation is used to make the wheat grow. The people know the use neither of oxen nor of ploughs for tilling their fields. In this town there are representations of a Buddha and a Bodhisattva which have by no means

[19] Cf. *Ancient Khotan*, i. pp. 311, note 7; 326. [*Calmadana* is named also in other Niya tablets, e. g. N. iv. 59; xv. 136, 158, 164, 310.]

[20] Cf. below, p. 298.

[21] See *T'oung-pao*, 1905, pp. 564 sq.

[22] See below, pp. 325 sqq.

[23] Cf. above, pp. 295 sq.

[24] See Chavannes, *Voyage de Song Yun*, pp. 12 sq.

the figure of barbarians (*hu*); the old men questioned said that it was Lü Kuang who had had them made on the occasion of his expedition against the barbarians.'

Charchan conquered by the T'u-yü-hun.

Sung Yün's account is of interest because it makes it quite clear that the Charchan of his time had become an oasis of very modest extent. His description of the primitive conditions in which agriculture was practised points to a population occupying a far lower cultural plane than that indicated by the remains of the Niya Site more than two centuries earlier. This finds its probable explanation in Sung Yün's previous statement that the neighbouring Shan-shan or Lop-nōr tract had been conquered and actually held by the T'u-yü-hun.[25] We know that these were nomad tribes of uncertain origin who in Sung Yün's time and for centuries later occupied the high plateaus stretching westwards from the Koko-nōr region. It is very probable that this T'u-yü-hun conquest at the time of Sung Yün's visit already extended to Charchan; for the *Pei shih* distinctly mentions both Shan-shan and Chü-mo as territories held by the T'u-yü-hun during the reign of their king K'ua-lü, who is mentioned for the first time in A. D. 540.[26]

Sacred images at Charchan.

Sung Yün's reference to the sacred images supposed to date from Lü Kuang's invasion is also of historical interest. It shows that the expedition undertaken by this Chinese general into the Tārīm Basin in A. D. 384 was not restricted solely to the temporary subjection of Kara-shahr and Kuchā.[27] It further supplies us with a definite instance of the early influence which specimens of Chinese art must have exercised on Buddhist sculptural work in the Tārīm Basin, in exchange as it were for the far stronger influence carried by Central-Asian Buddhist art eastwards. It only remains to add that the distance of sixteen hundred and forty li which Sung Yün's itinerary gives between Shan-shan and Tso-mo is greatly over-estimated, while the subsequent reckoning of twelve hundred and seventy-five li from Tso-mo to Han-mo, which corresponds to Hsüan-tsang's P'i-mo,[28] is distinctly too low. But, as M. Chavannes justly emphasizes, these and other serious errors in Sung Yün's distance estimates can cause no surprise, if account is taken of the critical defects of the text in which his itinerary has reached us.[29]

Hsüan-tsang's account of *Chê-mo-t'o-na*.

Hsüan-tsang, following the same route just a century and a quarter after Sung Yün, but in the reverse direction, has also left us a record of Charchan. After leaving the ruins of the old Tu-huo-lo kingdom, which, as we have seen already, must be located at Endere, 'he travelled about six hundred li eastward and arrived at the old *Chê-mo-t'o-na* 折摩駝那 kingdom, which is precisely the territory of *Chü-mo*. The city walls are very lofty, but there are no inhabitants.'[30] That the form 涅末 *Nieh-mo*, which the present text of the *Hsi-yü-chi* shows here for *Chü-mo* 且末, is but a graphic error, is clearly proved by the correct form found in the *Life* of the pilgrim. That his *Chê-mo-t'o-na* is probably meant as a reproduction of the current indigenous form of the name which in the Prākrit of Kharoṣṭhī tablets from the Niya Site figures as *Calmadana*, has been previously mentioned.[31]

Charchan deserted at Hsüan-tsang's passage, but reoccupied under T'angs.

Hsüan-tsang's testimony as to the deserted condition of Charchan at the time of his visit is of particular interest; for when Chinese control had been re-established, some fifteen years after his passage, Charchan figures once more in the T'ang dynasty's Annals as a place duly garrisoned. In an itinerary which is given by the *T'ang shu* for the route from Shan-shan to Khotan, and of which M. Chavannes has translated an abstract,[32] we are informed that after leaving

[25] See Chavannes, *Voyage de Song Yun*, p. 12.

[26] Cf. *ibid.*, p. 12, notes 2 and 7. As regards Shan-shan, cf. below, p. 323. [For the T'u-yü-hun, cf. now M. Pelliot in *J. Asiat.*, 1916, janvier–février, pp. 117, 122.]

[27] Cf. regarding this expedition, Chavannes, *Voyage de Song Yun*, p. 13, note 2; *Ancient Khotan*, i. p. 543, note 2.

[28] Cf. *Ancient Khotan*, i. p. 456.

[29] Cf. Chavannes, *Voyage de Song Yun*, p. 14, note 4.

[30] See Julien, *Mémoires*, i. p. 247; also *Vie de H.-Th.*, p. 290; Watters, *Yuan Chwang*, i. p. 304; cf. above, p. 288, and *Ancient Khotan*, i. p. 435, note 9.

[31] See above, p. 297.

[32] Cf. Chavannes, *Voyage de Song Yun*, p. 12, note 9. My extracts of this itinerary are here and elsewhere supple-

Shan-shan to the south of Lop-nōr and passing several stages which will be discussed below, 'one crosses the river Chü-mo, and at the end of five hundred li arrives at the garrison of *Po-hsien* 播仙 (" the garrison of the banished Ṛṣi ") which is the ancient town of Chü-mo 且末.[33] It was Kao-tsung who changed its name in the period Shang-yüan (A. D. 674–676).' That this place was actually occupied at the beginning of the eighth century may be concluded from the record which the *T'ang shu* makes of a meeting there between a Chinese commissioner and a chief of the Western Turks who was retreating towards Sha-chou along the southern route, some time between A. D. 706–708.[34] This record speaks of the 'town of Po-hsien', which confirms the date given for the change of name.[34a] It is true that Chü-mo already figures in the T'ang Annals about A. D. 640 as one of the many territories subject to the vast dominion of the Western Turks.[35] But the list there given seems purely formal, and the mention in it of Chü-mo can in no way invalidate the statement of an eyewitness like Hsüan-tsang, who a few years later found the town completely deserted.

Marco Polo's description of Charchan.

We have no further record of Charchan until we come to the account by Marco Polo, who passed here along the route from Khotan to Lop and into China about A. D. 1273–4.[36] His description of the 'road' which took him there from the 'Province of Pein', including the present tracts of Chīra, Keriya, and Niya, has already been quoted. 'Charchan', he tells us, 'is a Province of Great Turkey, lying between north-east and east. The people worship Mahommet. There are numerous towns and villages, and the chief city of the kingdom bears its name, Charchan. The Province contains rivers which bring down Jasper and Chalcedony, and these are carried for sale into Cathay, where they find great prices. The whole of the Province is sandy.'[37] It is clear that Marco must have seen the oasis in a comparatively flourishing condition, and it seems difficult not to connect this with the abundant traffic which must have passed along this ancient route into China at a period when the vast extent and the effective organization of the Mongol conquests had thrown China open to trade-intercourse with the most distant parts of Asia. The mention of 'Jasper and Chalcedony', just as in the case of the 'Province of Pein',[38] undoubtedly refers primarily to jade, which is found among the rubble brought down by the Charchan River and in the beds of all the large rivers descending to the Tārīm Basin through the northernmost chain of the K'un-lun. But that true jasper and chalcedony occur here also is proved by the worked stones of these materials, evidently belonging to the neolithic period, which I collected from eroded ground in the Lop-nōr desert, and the material for which must have been derived from the K'un-lun detritus.[39]

Charchan mentioned by Mīrzā Ḥaidar.

Charchan does not appear to be mentioned by Shāh Rukh's envoys, whose journey in A. D. 1422 along the desert route from Su-chou to Khotan is the next in time of which we possess a record.[40] But Mīrzā Ḥaidar in the sixteenth century knew its name, under the varying

mented from a MS. translation of the full text as found in *T'ang Shu*, chap. XLIII b, p. 15 recto, which M. Chavannes has very kindly placed at my disposal; see Appendix *A*.

[33] For notes on the several stages indicated by this itinerary west of Chü-mo, including 'the military post of the town of Lan' which may, perhaps, be identified with the T'ang fort of the Endere Site, see *Ancient Khotan*, i. p. 436, note 14; also above, pp. 293 sq.

[34] See Chavannes, *Turcs occid.*, p. 185.

[34a] For this date cf. now Pelliot, *J. Asiat.*, 1916, janvier-février, p. 121, note 3.

[35] Cf. Chavannes, *Turcs occid.*, pp. 30, 57, 306.

[36] Herrmann, *Seidenstrassen*, p. 99, assumes that the *Ta-thun* mentioned in the itinerary of a Chinese mission dispatched to Khotan about A. D. 940 is the same as Charchan; cf. Rémusat, *Ville de Khotan*, p. 78. The identification is possible, but I can find no direct evidence for it.

[37] Cf. Yule, *Marco Polo*, i. p. 194. It was Sir Henry Yule who first discovered 'the continued existence of Marco's Charchan' through a route attached to Mr. Johnson's original report on his journey to Khotan in 1865; see *ibid.*, i. p. 195, note.

[38] Cf. Yule, *Marco Polo*, i. p. 191.

[39] Cf. Mr. Reginald A. Smith's article on those worked stones, *The Stone Age in Chinese Turkestan*, in *Man*, xi. (1911) pp. 81 sqq.; also below, p. 357.

[40] Cf. Yule-Cordier, *Cathay*², i. p. 286.

forms of *Chārchān* and *Jurjān*, as that of a region in the extreme south or south-east of the Tārīm Basin.[41] But from the way in which he associates it with the distant wastes of Lob-Katak and Sārigh-Uighur and talks of the territories east of Khotan as 'deserts which consist of nothing but heaps of shifting sands, impenetrable jungles, waste lands, and salt deserts',[42] it appears to me very unlikely that an oasis of any importance could have existed there in his own times. Probably cultivation at Charchan rapidly declined when the cessation of free intercourse with China after the advent of the Ming dynasty in the fourteenth century deprived it of its chief *raison d'être* as an important halting-place on the long desert route connecting westernmost Kan-su with Khotan. We know that Benedict Goëz, after his long stay at Yārkand in 1604, was obliged to take for his journey to Cathay the devious route via Ak-su, Turfān, Hāmi, followed by the infrequent caravans of that time, even though he had previously visited Khotan.[43] It is obvious that the direct and much shorter route from Khotan past Lop-nōr to Su-chou was completely abandoned by such trade as was carried on at the time between Eastern Turkestān and China. Here it may be noted also in passing that the well-informed Persian trader Ḥājī Muḥammad, whose remarkably accurate account of a trade journey to Su-chou and Kan-chou Ramusio heard at Venice about A. D. 1550, knew only the northern route from Cathay past Hāmi, Turfān, Kāshgar, etc.[44]

Charchan resettled as a penal station.

From the inquiries made at Charchan, it seems to me certain that cultivation had completely disappeared there by the end of the eighteenth century, and probably for a long period earlier. It was only after the first third of the last century that the Chinese began to settle Charchan once more as a small penal station.[45] The growth of the new settlement seems to have been slow at first, and the shifty character of the original convict colonists retarded ordered development. The disturbed conditions during the Muhammadan rebellion, when the great oases westwards suffered depopulation, deprived Charchan for long years of any chance of attracting fresh settlers. But with the establishment of a much improved Chinese administration and the general rise of economic conditions in the country, the tide of renewed expansion has been steady. The convenience offered by Charchan as a base for supplies has helped to attract increased labour to the gold mines worked on the slopes of Arka-tāgh in the south-east; the oasis in turn has benefited by the market thus assured for its surplus products. Since the ancient desert route to Tun-huang and Kan-su came again into regular use for trade purposes some eight years before my visit, the commercial importance of Charchan had much increased, as all my local informants acknowledged. That there were among them four enterprising Pathān traders from Bājaur, who had found Charchan a convenient half-way station and base for their ventures extending from Khotan to Turfān and Tun-huang, was a striking illustration of the vitality of this ancient oasis, vigorously asserting itself after the latest ebb in its chequered fortunes.

Section II.—ANCIENT REMAINS AROUND CHARCHAN

Ancient canal west of Charchan.

The remains of earlier settlements at Charchan consist chiefly of extensive areas covered with hard débris to the south and south-west of that part of the modern oasis which lies on the left bank of the river. But traces of ancient occupation were met with when I first approached the oasis from the west. On crossing the bare gravel 'Sai' which extends to it, and when still close on three miles from the western edge of the present cultivated area, my attention was attracted by the raised

[41] Cf. Elias and Ross, *Tārikh-i-Rashīdī*, pp. 7, 9 note, 52, 406; in the last passage the 'river of Charchan' is also mentioned.

[42] Cf. Elias and Ross, *ibid.*, pp. 52, 64, 295.

[43] Cf. Yule-Cordier, *Cathay*², iv. pp. 222 sqq.

[44] Cf. Yule-Cordier, *Cathay*², i. p. 293.

[45] Cf. also Grenard, *Mission D. de Rhins*, i. pp. 176 sq., also p. 184, where an interesting account given by an eye-witness is recorded of the early days of the present Charchan; Forsyth, *Yarkand Mission Report*, p. 32.

embankment of a canal running northward. The fact that its bottom level was several feet higher than that of the deflated ground near by was a sufficient proof of its antiquity in spite of the name *Yangi-üstang*, 'the new canal', by which it is known now, and of the tamarisk scrub growing along it. I soon learned from my local informants that the name and the signs of returning vegetation were due to the attempt which Mūsā Bēg, an enterprising local headman, had made here, some twenty years before, to utilize an ancient irrigation channel for founding a new colony below the present oasis. The water had flowed freely for some years, during which young tamarisk scrub found time to effect a footing. But soon the endeavour to assure cultivation had failed from want of adequate labour, even though the ground which irrigation from this restored canal commanded was delared to be very fertile. It was an apt illustration of the main difficulty which seems ever to have dogged the fortunes of the most isolated of Turkestān oases.[1]

Ruined wall or *Tam*.

Going to the north-east for about a mile from the point where the canal line was crossed, I was shown a ruined wall of stamped clay about fifty feet long and still rising about eleven feet above the eroded ground. This was strewn with plentiful pottery débris of ancient appearance for a short distance all round. The ruin is known only as *Tam*, 'the wall', and its original character could not be determined. Proceeding thence across the bare Sai towards the south-western extremity of the oasis, I was shown a low and much-burrowed mound about forty feet in diameter, known as *Kalaghak-dong*, which from the human bones scattered around seemed to have served as a burial-place. By its layers of brushwood inserted between gravel it recalled the mounds of Tüga-dong examined in 1901 near Gulakhma.[2]

'Tati' of *Kōne-shahr*, on edge of Charchan oasis.

Within half a mile to the east of this, and quite close to the edge of cultivation, there was reached the northernmost part of the extensive 'Tati' generally known to the people of Charchan as the 'Kōne-shahr'. Some nameless saint's Ziārat, called *Yalghuz-tugh Mazār* ('the shrine of the lonely yak-tail'), marks its present limit northward. About a quarter of a mile south of this I could trace scanty remains of foundations of walls built of clay and bricks, all dug into by 'treasure-seekers'. The bricks measured about twenty by ten inches, with a thickness of about three and a half inches. Otherwise the site wore the look of a regular 'Tati', the potsherds mostly of coarse material resting on eroded riverine loess. The extent to which wind erosion has here lowered the ground-level could be gauged by far-stretched loess terraces extending on the east of the 'Tati' along a flood channel which carried water to a newly irrigated part of the oasis. These terraces, which moisture had evidently helped to protect, also bore pottery débris on their top.

Cultivation extended over 'Tati'.

Recently levelled fields fringed this 'Tati' on the north and north-east, and confirmed the statements of my local informants that much of the 'Kōne-shahr' area had been brought under cultivation again by the gradual southward extension of the oasis. M. Grenard, who visited Charchan in 1893 and first noticed its 'Kōne-shahr', evidently found the structural remains more extensive, though not differing in character from those I could still trace.[3] He was inclined to attribute them to the Charchan of Marco Polo's time, and to look for the ruins of the older Chü-mo further north about Tatran. But he based this belief on a supposed change in the Charchan River's

[1] The line of this old canal was crossed by me again at two points to the south-west of the present oasis. Owing to an error of the Surveyor, who passed here after dusk at the end of a long march from the foot of the mountains, Map No. 47 shows the head of the Yangi-üstang as taking off from the Ayak-tār stream instead of the Charchan River. In Dr. Hassenstein's map, based on Dr. Hedin's survey, the uppermost line of the canal is correctly delineated; but by a reverse error it is treated there as a side branch of the Charchan River and conjecturally shown as uniting itself lower down with the bed of the Ayak-tār, while in reality its course northward remains quite distinct. The point where the route southward crosses the canal is correctly marked in both maps.

[2] Cf. *Ancient Khotan*, i. pp. 465 sq.

[3] Cf. Grenard, *Mission D. de Rhins*, i. pp. 183 sq.; iii. p. 146.

course, of which actual survey has failed to reveal any evidence,[4] while all topographical considerations point to the conclusion that in historical times the area best adapted for cultivation must have lain in the present oasis and its immediate neighbourhood. The absence of datable relics precludes any definite judgement as to the period when the 'Kōne-shahr' area was last inhabited, just as it is impossible to guess how much of the remains of ancient Chü-mo and of Marco Polo's Charchan lies buried in the soil now again irrigated.

Oldest part of oasis east of river.

Here it may be noticed that according to local information, confirmed by the appearance of the trees and other indications, the oldest portion of the present oasis is represented by the *Aralchi* 'Mahalla', which lies on the right bank of the main river bed.[5] It takes its name, meaning 'the island one', from the fact that on its east side there is another smaller bed known as *Kōne-daryā*, which is still filled by the summer floods. If we assume the main settlement of ancient Chü-mo to have occupied the position of Aralchi, we can account for the fact that the passage already quoted from Li Tao-yüan's commentary on the *Shui ching* speaks of the Charchan River as flowing 'to the west of the walled town of Chü-mo'.[6] Otherwise it might be assumed that the old flood-bed, which passes close to the 'Kōne-shahr' and is now utilized to irrigate the westernmost part of the existing oasis, represents an earlier main bed. Owing to the very uniform slope of the detritus fan, at the northern foot of which Charchan is situated, the river bed is so broad and shallow that such a change could have taken place during the last fifteen hundred years without much affecting the position of the irrigated area.

Small antiques found at 'Tatis'.

Owing to the close vicinity of the 'Kōne-shahr' to the inhabited area and the constant search for 'treasure' proceeding among the small relics brought to light by wind erosion, there was little chance of picking up there *in situ* any fragments of archaeological interest. But ancient beads of stone and glass, as well as fragments of bronze ornaments, &c., are frequently found by the villagers, and of these a small representative set, as described in the List below, was acquired without difficulty during my brief halt. In general character these small relics resemble those obtained from the 'Tatis' around Khotan. None are of a type which at present admits of exact dating; but I may at least mention a bead of cornelian, Char. 0011, showing a peculiar inlay which is a characteristic feature in some acquisitions from Yōtkan. I greatly regretted the total absence of recognizable Chinese coins among the objects brought to me by the villagers; but my informants declared that such finds were rare now, since all structural remains had been destroyed by burrowing. My own search at the more distant 'Tatis' described below yielded no intact coins, only tiny fragments which, retaining the characteristic square rim, attest their former existence. I was inclined to attribute this complete destruction of copper coins, elsewhere so common at such sites, to the much-increased force of wind erosion on ground which is practically clear of drift-sand and is scoured in most places down to the bare gravel surface.

Visit to 'Tatis' south-west of oasis.

On November 22 I paid a visit to the more distant 'Tatis' which Saif-ullah, a local 'treasure-seeker', had to show me to the south-west of the present oasis. Proceeding from the Yalghuz-tugh Mazār, we first followed for about a mile and three-quarters the line of an ancient canal, still clearly recognizable, to a point where it was found to diverge from the 'Yangi-üstang' restored by Mūsa Bēg. For about one-half of that distance, or a little less, the pottery débris of the 'Kōne-shahr' Site extended. The embankment of the 'Yangi-üstang' showed sharply above the absolutely bare gravel plain. From a line about three miles south-west of Yalghuz-tugh there commenced an extensive 'Tati' area which was found to reach, with scarcely any interruption, for about two and a half miles further to the bank of a shallow depression marking a flood bed of the Ayak-tār stream.

[4] Cf. Hedin, *Central Asia and Tibet*, i. pp. 306 sq.

[5] Cf. also Hedin, *Reisen in Z.-A.*, p. 179.

[6] See above, p. 297.

Saif-ullah called it by the name of *Nān-yaigan* "*Tati*" ('the Tati where the meal was eaten'), explaining it by a whimsical story.

Surface features of 'Tati' ground.

The ground showed a uniform surface of fine gravel. Its flatness was broken only by occasional low swelling ridges which, however, bore signs of being swept and scoured with equal force by the winds. Their erosive power was attested by the general smallness and wind-worn appearance of the potsherds which covered the ground in abundance. The material was mostly dark-brown, black, or a deep red on the outside faces. As the specimens taken (Char. 001–007) show, both hand-made and wheel-made pottery are represented. A very conspicuous feature in the midst of this 'Tati' was a big 'witness' of pure riverine loess, about eighteen yards long and eight across, rising with steep slopes to a height of not less than twenty-three feet above the 'Sai' surface. Potsherds lay plentifully at its foot and also on all the small terraces breaking the slopes. Thence it may be safely assumed, I think, that the height of this 'witness' marks the extent to which the ground-level has here been lowered by wind erosion since such relics of ancient occupation came to be deposited. In the sides of this 'witness' I was unable to trace either clear stratification or embedded pottery débris. This suggests that the loess deposit is due mainly to aeolian growth and took place during a period preceding settled occupation.

Irrigation of ancient cultivated area.

There is every reason to assume that this area received irrigation mainly by a canal taking off from the Charchan River. But the flood-water of the Ayak-tār stream, which after heavy rain in the mountains is said still to carry water on occasion as far as the 'Tati', may also have been utilized as an additional source of supply. To judge from the configuration of the gently sloping alluvial fan, it seemed clear that the water of the Charchan River could still be brought here without any difficulty. It is equally certain from the instances of similar reclamation which I observed near Khotan (e.g. on the 'Sai' south of Sampula) and Kuchā, that the soil of all these 'Tatis', which far-advanced deflation has reduced to a surface of fine gravel, could be rapidly improved and rendered capable of cultivation by adequate irrigation; for the silt-depositing process which results from irrigation is everywhere in this region greatly aided by aeolian action, i.e. the accumulation, on moist soil and on all ground protected by vegetation, of the fine dust which fills the air of the Tārīm Basin so abundantly during the greater part of the year.[7] But, with many thousands of acres of fertile ground available lower down and near the river, renewed cultivation is not likely to take this direction.

'Tatis' of *Lālulik* and *Koyagh-ketme*.

The 'Tati' of *Lālulik*, to which I was subsequently taken at a distance of about two and a half miles northward, proved to be of the same character, except that small 'witnesses' of loess, about four to six feet in height, were here frequent. Pottery débris covered the ground for over a mile towards the existing oasis. A third 'Tati' area in this neighbourhood, called *Koyagh-ketme*, I was obliged from want of time to leave unvisited. I had seen enough to make sure that none of these 'Tatis' offered scope for systematic archaeological labour. Nor did I succeed in discovering among their small débris anything affording a definite clue as to their age. Some gauge, however, as to the relative chronology of these débris areas is afforded by the fact that, while to the south the ground once cultivated has been uniformly denuded right down to the underlying Piedmont gravel, the 'Kōne-shahr' 'Tati' close to the present oasis exhibits remains resting on loess soil. Here the process of erosion is still in progress, and will be continued until the new fields being pushed southward have invaded the whole area. The 'Lālulik' area, with its numerous surviving small loess banks, may represent an intermediate stage. However this may be, and whatever intervals of time may divide the periods of abandonment of these different 'Tatis', their extent is quite sufficient to prove that the ancient Chü-mo must be located in the position of the present Charchan oasis and its immediate vicinity

[7] Cf. *Ancient Khotan*, i. pp. 126 sqq.

Section III.—THE CHARCHAN RIVER ROUTE AND VĀSH-SHAHRI

Journey along Charchan River.

Careful inquiries made at Charchan had failed to reveal any information about ancient remains except those already described and some modest ruins mentioned near the route which leads along the Charchan River towards Charkhlik. I was anxious to reach the latter place as early as possible, and left Charchan for it on November 23 with all the more assurance because I knew that the diligent search made by Professor Huntington in the desert eastwards had failed to reveal there any traces of earlier settlements. For a general description of the five marches which we made down the right bank of the river or along the line of lagoons and marshes fringing it at various distances, I must refer to my Personal Narrative.[1] In Ismail, a hunter and cultivator from Tatran, a small hamlet and the only inhabited place on the river below Charchan, I found an exceptionally reliable guide, and with his help the reported remains near the route could be located and visited without loss of time. Tatran itself, being situated on the opposite side of the river, was not visited. But from the information supplied by Ismail and confirmed at Charchan, it was clear that what hampered the growth of the small settlement, then said to count only six families of permanent settlers, was not want of water or of arable land, but mainly the difficulty, due to inadequate labour, of maintaining the canal head in position during the heavy floods of the spring and summer. In fact, the flow of water in the river, in spite of the late season, was still so deep and rapid as to make its fording on foot awkward at most places where the bed was united.

Ruin of Stūpa known as *Tim*.

I had occasion to convince myself of this when on November 25 I crossed the left bank from near the shepherd hut of Shōr-köl-öghil in order to examine a small ruined structure called merely *Tim* or 'tower'. It is situated about eleven miles below Tatran, at *circ.* 38°33′ lat., 85°55′ long., and has been briefly referred to by Dr. Hedin as the ruin of an 'old P'ao-tai'. The 'Tim', discovered only some hundred yards off the river-bank, proved to be the ruin of a small structure, once apparently square, solidly built with sun-dried bricks and stamped clay. The extant portion, best preserved on the south-west face, showed there a length of eleven feet. The north-east face being badly broken, the breadth of the surviving masonry was reduced to about seven feet. Its clear height was also about seven feet; but the top of the small débris-covered mound which the structure occupied rose itself four feet above the general ground-level. The ruin represents in all probability the lowest base of a small Stūpa, and its antiquity is attested by the great size of the bricks and their peculiar setting. The bricks measured on the average nineteen to twenty by fourteen to fifteen inches, with a thickness of four inches. They were well made, and set in regular single courses with layers of hard stamped clay, eight inches high, between them. The system of masonry closely resembled that observed in the ruins of the earlier settlement at the Endere Site, and bore the same ancient appearance.

Early settlement by present river-course.

No pottery débris or other ancient remains could be traced near by. But this is scarcely surprising on ground kept moist by the vicinity of the river, where less solid structures were bound to decay and small débris was liable to be covered by riverine loess. The main interest of the ruin lies in the fact that it proves the existence of a settlement in Buddhist times very near the present river course, and thus supports the presumption that the latter has changed less in its main direction than the many dry channels and the strings of lagoons, encountered on either side from a point below Tatran, might otherwise lead one to suppose. Close by I noticed the course of a small irrigation cut. According to Ismail it dated back to an attempt made about fifteen years before by people from Tatran to carry on cultivation at this point. After a few years it was abandoned owing to the *shōr* or salinity developed by the soil.

[1] Cf. *Desert Cathay*, i. pp. 326 sqq.

Remains of *Yalghuz-dong.*

The remains to which Ismail guided me on the following day, though manifestly of late date, were yet curious and at first sight rather puzzling. Leaving our camping place at Chong-kul (see Map No. 50. A. 2), we made our way through a belt of spring-fed, reed-covered marshes, and then over ground where salt-impregnated patches alternated with thickets of luxuriant riverine jungle, to a ridge of tamarisk-covered sand-cones known as *Yalghuz-dong*, 'The Lonely Hillock'. I found there the remains of three small isolated structures, with oblong walls of very soft brickwork, occupying the tops of separate knolls within thirty to forty yards of each other. The walls showed a uniform thickness of two feet. Their bricks were mixed with plentiful wheat straw, and measured about sixteen by eight inches on the average, with a thickness of four to five inches. The best preserved and apparently largest structure measured twenty by thirteen feet. The walls stood only a few feet above the ground, and though partially protected by drift sand which the tamarisk scrub had detained, they nowhere showed remains of any superstructures. On the slopes of the knolls, rising to about thirty feet above the plain, there lay some large pieces of poorly worked timber, apparently all Toghrak, which Ismail thought might have belonged to coffins; but there was nothing to show their original position or use. It was not easy to account for the poor construction of these walls and their strange situation. Their survival notwithstanding the softness of the bricks suggested no great age.

Ruined enclosures of *Kōne-tamlik.*

The puzzle was not yet solved when, after going for about one and a half miles to the north-east across dried-up marsh, I was shown by Ismail a second group of small rectangular structures closely resembling the first in material and appearance. They occupied a low ridge by the side of what was unmistakably an old irrigation canal. Here, too, the walls built of soft bricks stood only two to four feet above ground, and showed no sign of having ever borne superstructures. A depression a short distance to the north of the ruined walls was lined by a thicket of dead Toghraks, and distinctly recalled an old river bed. After following the traces of the canal, which dead tree-stumps standing in line helped to mark, for about three-quarters of a mile eastwards, Ismail brought me to the principal group of the 'old walls', *Kōne-tamlik*, as he called the whole site. Here I found a row of over a dozen rectangular enclosures, built of the same brickwork but more completely preserved, stretching without any distinctive plan from east to west along the top of a low ridge. They were all detached and their size varied greatly, the largest being in the centre and measuring close on fifty by forty-two and a half feet. The walls were only some four feet in height. But on one side each enclosure showed a narrow arched gateway standing to a somewhat greater height than the rest of the walls, a clear proof that the latter were never meant to bear a superstructure.

Old Muhammadan cemetery.

Thus the true explanation of these strange ruins very soon revealed itself. Everything recalled the walled enclosure so often seen in Muhammadan cemeteries further west in the Tārīm Basin, and this conjecture was promptly confirmed by the discovery of a grave just outside one of the enclosures near the north-east edge of the ridge. A little clearing revealed the end of a coffin formed of a hollow tree-trunk and covered on its top by a row of rough Toghrak branches laid across much after the fashion I first observed in the old Muhammadan graveyard of Hāsa near Moji.[2] When the few men with me had scraped away enough of the soil to display the feet of a woman or child turned due south, it became quite certain that the remains were those of a Muhammadan burial-place.[3]

[2] See *Ancient Khotan*, i. p. 112.

[3] As Ismail was also Dr. Hedin's guide it is very probable that the 'old Mussulman burial-place with several *gumbez* (tombs)' to which passing reference is made by him in *Central Asia and Tibet*, i. p. 308, at a point south of the Charchan River, is identical with the remains just described. The mention made also of 'houses' is not at variance with this, since the dimensions recorded of the largest among them clearly point to identity with the enclosure above described.

Evidence of earlier agricultural settlement.

Finds yielding chronological evidence could not be expected in such graves, and for the collection of anthropological measurements on the bodies here buried neither time nor the requisite labour was obtainable. Yet, even without more definite evidence as to date, there was antiquarian and geographical interest in the discovery of these remains; for it was safe to conclude from them that at a period not very remote, when the Charchan River followed a more southerly course (perhaps the one marked by the line of marshes which our route was skirting), a settlement at least partly agricultural had been able to maintain itself here for a time under physical conditions probably resembling those about Tatran. Now, with the shift of the river northward and the probable progress of desiccation in the meantime, the adjoining ground had undergone a dismal change. Extensive stretches of soil we had to cross close to the remains of the old settlement were found encrusted with hard cakes of salt, and salinity proved so prevalent everywhere as to preclude any thought of renewed occupation.

Wells of Yaka-toghrak and Chingelik.

On November 28, the sixth day after leaving Charchan, our route finally diverged from the river near the deserted station of Lashkar-satma, and, striking south-eastwards across a belt of high and sterile dunes, brought us to the desert halting-place called Yaka-toghrak (see Map No. 50. D. 2). Its well of brackish water proved unfit for human consumption, and this probably is the case also with water obtained by digging at the patch of desert vegetation lying close to it on the east and known as Chingelik. The physical conditions are such that the nearest route from Lop-nōr and Charkhlik to the Charchan River must always have followed this line. Hence, having regard to what we shall presently prove as to the old localities further east on this route, I consider it quite safe to identify the wells of Yaka-toghrak and Chingelik with the 'wells T'ê-lei' 特勒井 which the itinerary of the T'ang Annals mentions on the way to the Chü-mo (Charchan) river from *Hsin-ch'êng* 新城 (' the New Town '), ' which is also called the town of *Nu-chih* 弩支.'

Vāsh-shahri Site identified with 'New Town' of T'ang itinerary.

That Hsin-ch'êng must correspond to the present small oasis of Vāsh-shahri, or rather to the ruined site crossed by the Charkhlik-Charchan route some six miles west of it, is made quite clear by the distances and bearings recorded in the T'ang itinerary, and has been correctly recognized by Dr. Herrmann.[5] The itinerary tells us that ' 300 li to the south of the sea *P'u-ch'ang* (or Lop-nōr) is the garrison of *Shih-ch'êng* 石城, " the Stone Town ", which is the same as the *Lou-lan* kingdom of Han times and is also called *Shan-shan*. This is the place where K'ang Yen-tien was commissioner of the garrison, and in this quality entered into communication with the Western Countries. 200 li further to the west one arrives at *Hsin-ch'êng*, " the New Town ", which is also called the town of *Nu-chih*; it was constructed by (K'ang) Yen-tien.[5a] Further to the west, one passes the wells of *T'ê-lei* (the wells of the Tegin); one crosses the river *Chü-mo*, and after 500 li one arrives at the garrison of *Po-hsien* which is the ancient town of Chü-mo.' It has been seen above that the terminal point of the route to the west can be located with absolute certainty at Charchan. It is equally certain that the ' Stone Town ' of T'ang times, then the chief place of Shan-shan or the ancient Lou-lan from which the route starts, is represented by the present oasis of Charkhlik.[6] The western bearing and the distance of 200 li given thence to the ' New Town ' take us exactly to the ruined site of Vāsh-shahri, which, as Maps Nos. 53, 57 show, lies close on 50 miles by measured road distance to the west-south-west of Charkhlik.

Ruined site of *Vāsh-shahri.*

I halted some four miles further west, close to the point where the Keriya and Charkhlik district borders are supposed to meet. Then on November 29 I surveyed at leisure the débris-strewn area which marks the position of the earlier settlement, with the help of guides and labourers

[4] Cf. Chavannes, *Voyage de Song Yun*, p. 13, note; also above, p. 298, and Appendix *A*.

[5] See Herrmann, *Seidenstrassen*, p. 100.

[[5a] For this settlement in A.D. 627–49 of the Sogdian chief K'ang yen-tien, see now Pelliot, *J. Asiat.*, 1916, jan.–fév., pp. 118 sqq.]

[6] Cf. below, p. 320; also *Desert Cathay*, i. p. 345.

secured overnight from the small oasis. Among scattered groups of large tamarisk-cones there extended for about one mile both north and south of the route, and with a total width of about half a mile, open patches of eroded ground exhibiting all the features of a typical 'Tati'. Wherever it was clear of drift-sand, the loess soil was profusely covered with fragments of pottery. Among these I was struck at once by the relative frequency of broken pieces of finely-glazed ware in a variety of rich colours, from chocolate brown to bluish green of celadon. The examination which Mr. R. L. Hobson was kind enough to make at the British Museum of the specimens brought away (V. S. 0011–23) has proved the presence among them of grey porcellaneous stoneware unmistakably of Chinese origin, and exhibiting characteristics which permit their safe attribution to the period of the Sung dynasty. In the case of some pieces (V. S. 0012, 0013, 0015), the finely crackled appearance of the thick glaze, as known from the Chün-chou ware of the Sung dynasty, is particularly noteworthy.[7] In others (V. S. 0016, 0019) the mottled glaze of deep olive brown is of interest.

Chronological evidence of coins.

Fragments of small objects in bronze, such as buckles, arrow-heads, and hair-pins, bits of coarse opaque glass, and beads of all sorts in stone, glass, and paste, were also numerous among the small finds brought to me. But they cannot afford such clear chronological indications as the stoneware. For the evidence of the latter full confirmation was furnished by the coins which were either picked up during our visit or else brought to me by Vāsh-shahri villagers accustomed to search these small 'Tatis'. Among the eight copper pieces thus obtained, and shown in Appendix *B*, three belong to *K'ai-yüan* issues starting from A. D. 618–627, and continued during the first century of T'ang rule; another probably dates also from that dynasty, while the remaining four show *nien-haos* of the Sung dynasty extending from A.D. 1023 to 1101. Thus the occupation of the site, probably from T'ang times, down to the twelfth century is conclusively proved.

Structural remains of site.

Any structural remains that had survived at this site were invariably found by the side of tamarisk-cones which had helped to protect them. These ruins, about half a dozen in number, were those of quite small dwellings containing only one or two rooms. With a single exception, they showed walls built of sun-dried bricks having an average size of fifteen to sixteen inches by eight to nine inches, with a thickness of four inches. These were placed in single courses, separated by layers of clay, three to four inches thick. In the ruins north of the route the walls were found destroyed to within a few feet of the ground or else almost completely eroded. But at two points of the southern part of the area wall portions protected by sand-cones still rose to a height of about seven feet above the ground.

Ruin built of hard bricks.

In the northern part of the area the ruined structure of which the plan is shown in Pl. 21 was of special interest. It consisted of two small rooms built of hard burnt bricks, with a third of the usual sun-dried brickwork adjoining. The masonry of the former, preserved to a height of about four and a half feet, was remarkably careful and regular. It showed a thickness of twenty-two inches, and consisted of bricks measuring thirteen by eight inches and two inches thick. They were laid with the long and short sides facing in alternate courses, a practice that I had not previously observed in the ruins surveyed south of the Taklamakān, but subsequently rendered familiar by the masonry of many buildings, old and new, I had occasion to examine in Kan-su. About six inches from the floor a kind of plinth was formed by a course of bricks projecting two inches. Here, as in the other small ruins, excavation failed to yield any finds whatever, a result probably of the repeated searches to which these remains must have been subjected by Vāsh-shahri villagers and others. I have not noticed the use of burnt bricks in any other ancient structure in the southern part of the Tārīm Basin, and it is certainly a peculiar feature. It may have been resorted to in order to give greater security to whatever was kept in these small rooms; but it

[7] Cf. Bushell, *Chinese Art*, ii. pp. 22, 25 sq.

would be useless to conjecture the exact purpose. It may, however, be noted that the structure occupied the south-west edge of what looked like a completely decayed circumvallation in clay, measuring about 180 yards in circumference.

Ruins in southern portion of site.

A short distance to the south of the caravan track, and close to where the walls of a rectangular structure about thirteen feet long emerged from the side of a tamarisk-cone, I found a double row of dead Tereks marking an ancient orchard (Fig. 85). About a mile to the south-south-west I was shown the comparatively well-preserved remains of a small dwelling, eighteen by twelve feet, with walls two feet thick, by the side of a tamarisk-cone. The top of the latter rose twelve feet above the floor, while the ground on the unprotected side of the structure had been lowered by wind-erosion to a depth of six feet below the original level. An approximately similar extent of erosion on the one hand and of growth of tamarisk-cones on the other was observed elsewhere near these ruins. Gauged by the standard of measurements at other sites of which the date is fixed, it serves to prove that the abandonment of the Vāsh-shahri Site must go back to a mediaeval period not very far removed from the twelfth century, to which the above-mentioned chronological evidence takes us.

Marks of Chinese influence.

Here I may note that the general impression left by my examination of the site and its relics was that of Chinese influence more direct than that observable in the ruins of the Khotan region. This has since received support from the fact that, as already stated, Mr. R. L. Hobson has recognized, among the pottery and stoneware fragments picked up at Vāsh-shahri, pieces of bowls which must have been originated at the Chün-chou factories of Ho-nan during Sung times. But it is impossible to say whether this increased Chinese influence was due to the presence at this point of a small Chinese colony, or resulted merely from a position so much further east on a once much-frequented trade route from China. That this route continued to be regularly used during Mongol domination in the second half of the thirteenth century, we know through Marco Polo. His narrative, in fact, seems to contain an allusion to Vāsh-shahri, though he does not name it distinctly as an inhabited place.

Marco Polo's route beyond Charchan.

'Quitting Charchan,' so Marco tells us, 'you ride some five days through the sands, finding none but bad and bitter water, and then you come to a place where the water is sweet. And now I will tell you of a province called *Lop*, in which there is a city, also called *Lop*, which you come to at the end of those five days. It is at the entrance of the great Desert, and it is here that travellers repose before entering on the Desert.' [7a] With regard to this itinerary east of Charchan two points must be clearly recognized. One is that the five days' ride through the sands, with none but brackish water, cannot refer to the usual route along the Charchan River, where good water is easily obtainable, but seems to point to a more direct track crossing the desert belt of sand and gravel which extends between the Charchan River and the route skirting the foot of the mountains from Charchan to Vāsh-shahri. A reference to the map shows that such an intermediate track would be considerably shorter than either of the two routes which we actually surveyed. That the ground offers no very serious obstacles to a march along such a line during the winter was clear from the information given by Ismail, who had often crossed this desert on his hunting expeditions after wild camels, &c.

Marco Polo's road reckoning to *Lop*.

The other point is that a traveller following this line would reach Vāsh-shahri in five ordinary marches, and this would be for him the first 'place where the water is sweet'. Vāsh-shahri must have formed then as now the western limit of the 'province of Lop', represented by the present Charkhlik district, and it is quite in keeping with Marco Polo's usual reckoning that his five marches should be counted to the nearest place of 'the province', instead of to its chief place, the 'city' of Lop. That the latter must be located at the present oasis of Charkhlik is made certain by a number of

[7a] See Yule, *Marco Polo*, i. p. 194.

cogent considerations, geographical and archaeological, which I shall have occasion to discuss further on. Charkhlik itself certainly could not be reached by five marches from Charchan, my measured road distance being 198 miles. But everything in Marco's itinerary comes right if we take the words 'which you come to at the end of those five days' as referring to the 'province called Lop', and treat the words immediately preceding, 'in which there is a city, also called Lop', as a parenthetical remark prefatory to his subsequent notice of that town.

Irrigation of Vāsh-shahri Site.

On leaving the site of Vāsh-shahri I was struck by the fact that the much-fissured trunks of dead fruit trees, willows, and poplars lay scattered, not merely within the somewhat narrow belt occupied by the remains of old homesteads, but also for a short distance over the bare gravel 'Sai' extending eastwards. An original top layer of fertile soil had evidently been carried away here altogether, and this accounted for the raised line of the canal still clearly traceable across the 'Sai'. But curiously enough this ground was said to be reached during the summer by shallow floods from the Vāsh-shahri River. Is it possible that inundation water has found its way here only after deflation had done its work? The canal, after skirting the old site, seemed to turn to the north-north-east, this being evidently the natural direction of the drainage, as shown by the summer flood-beds of the actual river which we began to cross amidst luxuriant Toghrak jungle some three and a half miles further east. After another two miles or so across a bare plain of fine gravel, we reached the new colony of Vāsh-shahri by the present main bed of the river. That the river bed, as assumed by Professor Huntington, formerly followed a more westerly course, and thus approached the old site much nearer than it does now,[8] appears very probable. But I could not spare time to follow the line of the canal to its head, and in any case there never could be a question as to the main fact that the ruined settlement derived its water from this river, whatever variation its course may have since undergone.

Modern settlement of *Vāsh-shahri.*

I have recorded elsewhere my impressions of the curious colonizing venture under official auspices to which the present hamlet of Vāsh-shahri owes its existence.[9] The intermittent growth of the little oasis, on the one hand, shows that the importance of the ancient route connecting Charkhlik with Charchan and thence with Khotan has been fully recognized by the Chinese administration in our time also; on the other, it well illustrates the special difficulties which under existing conditions beset any attempt to facilitate and develop traffic along it by permanent settlements. The three sons of the original settler, who first took up land by the Vāsh-shahri River about thirty years before, had kept to their little colony and prospered. But the destitute agriculturists whom successive Ambans of Charkhlik, under higher official orders, had tried to attract to the small settlement from distant oases by advances of food, seed corn, &c., for some fifteen years past,[10] had in almost all cases decamped whenever the harvest did not come up to their expectations, or the question of refunding advances arose.

Difficulties of agricultural development.

With the keen competition for agricultural labour going on along the widely scattered oases in the east of the Tārīm Basin, there was little chance of detaining such roving folk at an outlying place like Vāsh-shahri. A year or two before my visit the population was said to have thus dwindled down to only five households. But now some twenty families had been brought there by Rōze Bēg, who had last contracted for this official 'development scheme', and money had been spent on building a rest-house, granary, and Bāzār, all of which might serve as an effective 'eye-wash'. I, too, like Dr. Hedin, heard complaints about climatic drawbacks, apparently due to the vicinity of the main range and the force of sand-storms coming from the north-east, but none about deficiency of water. The supply in the river was declared to be adequate for cultivation by about

[8] See *Pulse of Asia*, p. 221.
[9] Cf. *Desert Cathay*, i. pp. 334 sq.
[10] Cf. Hedin, *Reisen in Z.-A.*, p. 171.

200 families, though rather difficult to control at the time of the summer floods. But whether that estimate was even approximately correct, and what proportion the maximum area of land now irrigable would bear to the extent of the ancient cultivation, as marked by the ruined site westwards, are questions which only prolonged observation by an irrigation expert would permit to be definitely answered.

Section IV.—THE OASIS OF CHARKHLIK AND ITS OLD REMAINS.

Charkhlik as base for Lop-nōr explorations.

On December 2 I reached Charkhlik after two marches aggregating about fifty-one miles from Vāsh-shahri. They led mainly along a desolate glacis of gravel, which stretches of sandy steppe with scanty tamarisk growth and thorny scrub fringed on the north (see Maps Nos. 53, 57). The oasis of Charkhlik was to serve as my base both for long-planned explorations around Lop-nōr and for the difficult journey which subsequently was to take my caravan right across the great desert north-eastward to Sha-chou or Tun-huang by the ancient route followed by Marco Polo and by Hsüan-tsang before him. I was well aware of the serious physical difficulties to be faced in exploring those ruined sites north of Lop-nōr which Dr. Hedin, on his memorable journey of 1900, had first discovered, situated as they were more than a hundred miles from the nearest supply of drinkable water. The ancient desert route to Tun-huang, after having been abandoned and almost forgotten for centuries, had indeed come into use again with traders some seven or eight years previously. But the information I had so far succeeded in gathering about it was extremely scanty. Everything pointed to the need of careful arrangements about transport and supplies, if serious risks and losses were to be avoided.

Importance of transport arrangements.

What I had to prepare for at Charkhlik was not a single crossing of the desert alone, but a rapid series of expeditions partly over ground quite unknown and—most serious feature of all—implying prolonged stays at desert sites with a considerable number of labourers. The greater the uncertainty about the extent of the operations before me, the more important it was to husband my time as carefully as possible. For work in waterless desert, I knew I could use only the few months of winter, when the cold would allow me to assure transport of an adequate supply of water in the form of ice. After March the crossing of the desert to Tun-huang would for similar reasons become risky, if not practically impossible. In order to obviate delays which in a region so devoid of resources would be bound to hamper me doubly, it was of the utmost importance to assure adequate transport and supplies from the start and to keep them ready beforehand for all likely contingencies.

Exacting tasks at Charkhlik.

Thus I had exacting tasks to cope with during my short stay at Charkhlik. Within three days I had to raise in the small oasis a contingent of fifty labourers for proposed excavations; to procure food supplies to last them for five weeks, and my own men for at least a month longer; and to collect as many camels as I could for the transport, seeing that we should have to carry water, or rather ice, sufficient to provide for us all on a seven days' march across waterless desert north of the Lop-nōr marshes, and then during prolonged excavations at the ruins, as well as on the return journey. When I found that by exhausting all local resources I could only raise the number of camels to twenty-one, including my own and six animals hired at Charchan, the problem looked formidable enough. It would have been still more complicated had I not been able to reckon upon the small fishermen's hamlet at Abdal, near the point where the Tārīm empties itself into the Lop marshes, as a convenient dépôt. Though that last inhabited place on the desert route eastwards could furnish no supplies, I could safely leave behind there all baggage and stores not immediately needed, ready for the move on to Tun-huang when the time came.

In my Personal Narrative I have related at length how much I owed to the energetic and willing assistance rendered by the late Liao Ta-lao-yeh, the cultured Chinese magistrate of the Charkhlik district, in overcoming all the difficulties of these preparations.[1] A recommendation from my old friend and patron P'an Ta-jên, now Tao-t'ai at Ak-su, whose control extended as far south as Charkhlik, had been helpful in enlisting the scholarly Amban's eager co-operation, apart from his own genuine interest in the objects of my journey. It needed all his authority to secure me an adequate posse of labourers for my proposed excavations. Whether they were descendants of colonists brought from Keriya and the northern oases, or of Lop fishermen who had taken to agriculture, all the villagers alike were thoroughly frightened by the prospect of having to leave their homes in the depth of winter for a distant and wholly unknown journey in the waterless desert north-eastward.

Help of Chinese magistrate.

Foreseeing the hardships which awaited us in that desolate region and the risks which might have to be faced from want of water in certain contingencies, I was doubly anxious to enlist only men of thoroughly sound physique and to make sure of their starting fully equipped and with ample supplies. The difficulties arising over the selection of suitable men would have been greater still had not help opportunely arrived on the second day in the persons of two hardy hunters from Abdal. Old Mullah and Tokhta Ākhūn had in 1900–1 seen service with Dr. Hedin around Lop-nōr. In compliance with a request sent ahead from Vāsh-shahri they arrived, after a hard ride from their home at Abdal, quite ready to take their places by my side. Neither of them had ever approached the ruins by the direct route from Abdal, and therefore they could not be expected to act as guides beyond the point where we should have to leave the Lop marshes. But they knew well the nature of the ground to be traversed, and were inured to hardships by their life as hunters. So their prompt appearance on the scene and calm willingness to share our fortunes in the desert helped greatly to allay the worst fears of the men I was obliged to levy as labourers. The assurance of generous pay and a promise from the Amban of exemption from the usual corvée did the rest to make the victims acquiesce in their fate with some outward show of composure.

Lop hunters engaged for guidance.

The preparations which thus kept me engrossed day and night while at Charkhlik were singularly fitted to draw my attention to antiquarian interests close at hand. A number of considerations convinced me that the oasis of Charkhlik was the chief place of this whole region near Lop-nōr in old times as it is now. The river to which it owes its existence is the largest descending to the Lop-nōr depression from the K'un-lun east of Charchan. The facilities for irrigation it offers on its alluvial fan are far more assured than any which could possibly be derived in this region from the terminal course of the Tārīm itself, winding in low and ever-shifting beds through alluvial flats salt-impregnated for ages past. For any one studying local conditions on the ground, the geographical facts could leave no doubt that the present Charkhlik marks the position of Marco Polo's *Lop*, 'a large town at the edge of the Desert', where 'travellers repose before entering on the Desert' on their way to Sha-chou and China proper.

The oasis of Charkhlik.

Before discussing the evidence which supports this location and enables us, I believe, to trace back the history of the Charkhlik oasis to much earlier times, it will be convenient to mention here the essential facts about the present oasis and such ancient remains as I succeeded in tracing within its limits. The local information I was able to gather seems to show that the present settlement has developed in the course of the last century in much the same manner as Charchan. The Chinese always recognized the commercial and strategic importance of the route leading direct from Khotan to Kan-su by the southern edge of the Taklamakān and Lop-nōr, and from about the first third of the nineteenth century onwards they endeavoured to facilitate traffic along it by the creation of an

Growth of present settlement.

[1] Cf. *Desert Cathay*, i. pp. 338 sqq.

agricultural settlement at Charkhlik. That this locality offered better chances for cultivation than any other in the whole Lop-nōr region must have been known to traders and petty officials who used to visit the quasi-nomadic *Lopliks*, or Lop people, fishing and grazing along the lowermost course of the Tārīm.[2] But in view of the very primitive economic conditions attested for this scanty riverine population even within living memory, it is probable that cultivation did not begin at Charkhlik until the Chinese about 1830–40 established here a penal colony with exiles from Khotan.

Population of Charkhlik.

When Prejevalsky as the first European visited Charkhlik in 1876, he found there a village with twenty-one houses occupied by free emigrants from Khotan, besides a mud fort sheltering over a hundred convict settlers cultivating land for the Government.[3] Gradually a number of Lopliks, like the Kirghiz north-westwards, with whom they appear to be closely related in ethnic origin, were attracted to agricultural life, and at the time of my visit the total number of homesteads was counted at about three hundred.[4] Professor Huntington estimates the population of the little town at twelve hundred souls. That the produce in cereals is considerably in excess of local needs was evident from the fact that a Chinese garrison of about a hundred men was recently maintained here for close on ten years. Chinese administration, as of yore, still retains a keen eye for matters of military geography. Thus it was sure to recognize the strategic importance of Charkhlik, where well-known routes from Tsaidam and Tibet join those leading to Khotan, Kuchā, Kara-shahr, and Tun-huang. The neat little 'Yangi-shahr', with walls of stamped clay which had sheltered this garrison, now stood empty. But the appearance on the scene, some years after its erection, of a body of Tungan rebels, who had fled from Hsi-ning to Tsaidam, and were thence troubling the Mongols grazing in the mountains south of Charkhlik, had sufficed to illustrate the wisdom of Chinese precautions.

Commercial importance of Charkhlik oasis.

The position of Charkhlik is of equal importance for trade development. From the Mongol grazing grounds in the Chimen-tāgh and Tsaidam great quantities of wool find their way down to Charkhlik; and the export of it, both to Khotan and northward to Kara-shahr and Urumchi, provides profitable business for a number of traders. There was life in the large and well-built Bāzār, and my inquiries showed that the increasing use made of the rediscovered ancient trade route through the desert eastwards by caravans coming from or going to Khotan was eagerly welcomed by the Charkhlik settlers; for it helped them to dispose of surplus products with profit and to secure their industrial needs or luxuries at cheaper rates. On the other hand, it is certain that without the existence of this cultivated area, where caravans can revictual and give a rest to their animals before facing the great stretches of absolute waste which are crossed by all the routes radiating from this point, mercantile traffic would be far more difficult than it is at present.

Water-supply of Charkhlik River.

It has already been stated that the river of Charkhlik, from which the oasis derives all its irrigation, is the largest course of water which descends to the Lop-nōr depression from the mountains stretching east of Charchan. Its volume is not sufficient to assure its junction with the waters of the Charchan River and Tārīm except at the time of the spring and summer floods. Yet

[2] Cf. Forsyth, *Yarkand Mission Report*, p. 54. The description of 'Lob', in pp. 51 sqq., from native sources conveys a good idea as to the impressions which visitors from the settled parts of Eastern Turkestān carried away of the uncivilized state of existence prevailing among the Lop people.

[3] Cf. Prejevalsky, *From Kulja to Lob-nor*, pp. 75 sq.

[4] This probably includes a certain number of Lopliks, in the transition stage as it were, who still cling to their fishing for part of the year but cultivate fields at Charkhlik and live there in the hot season, when life among the lagoons and marshes of the Tārīm is rendered very trying by mosquitoes, &c.; cf. Hedin, *Reisen in Z.-A.*, p. 169. Other Lopliks have turned into land-holders of substance, such as Tursun Bai, whose spacious and comfortable house served me as quarters and also as a good illustration of the material progress accomplished within a single generation.

to judge from the actual width of the well-marked main bed near the small town, and from what local information could be gathered, the available supply of water would probably be adequate to allow of a further extension of the irrigated area, were the needful labour assured. My own short stay at a season when the much-reduced winter supply of water in the river was already frozen would not allow of the collection of reliable data, and those which Dr. Hedin is likely to have gathered during his prolonged sojourn in April and May 1901 are not at present accessible to me for reference. But the abundance of the spring and summer supply is proved by the fact that the river is fed by the snowy mountains of Chimen and is large enough to have carved its way in deep-cut gorges through the outer main range of the K'un-lun or the Āltin-tāgh.[5]

Antiquity of Charkhlik oasis.

The essential fact, however, for our inquiry is that the water available for irrigation in the Charkhlik-su is greatly in excess of that carried by either of the two streams of Vāsh-shahri and Mīrān, which alone at present support cultivation in this region apart from the Charkhlik oasis. Whatever physical changes desiccation may have worked in this part of the Tārīm Basin, it is impossible to assume that in the case of these three rivers originating in the same range, flowing over ground of essentially identical nature, and having their terminal courses at distances of only two marches from each other, the relative volumes of water carried by them and their relative importance for supporting agricultural settlements could have undergone material variation within the limited period to which our historical information for these parts is confined. On this ground it appeared *a priori* safe to assume that if earlier occupation was attested westwards at Vāsh-shahri by the remains already described and eastwards at Mīrān by the ruins of an 'old town' which our maps have marked since Prejevalsky's journey, the position of Charkhlik itself must also have been occupied before by some old and probably larger oasis.

Ruined circumvallation within oasis.

In view of these indications, the mention of an old *Sipil* or circumvallation at Charkhlik had already attracted my attention when I passed through Charchan.[6] Busy as I was kept by my other work, I looked for it on my arrival without loss of time, and my satisfaction was great when a necessarily rapid survey showed that signs of ancient occupation were clearly traceable in the very centre of the present cultivated area of Charkhlik, even on the surface. Quite close to the east of my quarters stretched one of the walls of a ruined circumvallation, built in oblong shape and well known to the people as the *Sipil.* Its mud ramparts, though badly decayed and completely levelled in places for the sake of cultivation within and without, could easily be traced for rather more than half a mile from north to south. Its width was about one-third of a mile. The extant height of the ramparts varied from twelve to twenty feet. The line could best be followed on the north and west fronts; on the south it was almost effaced. Though the whole of the interior was occupied by fields and homesteads, a rapid examination disclosed evidence of old walls in the large bricks utilized in parts for the dwellings of the modern settlers. Thus, near the centre of the enclosed area I noticed a mound about thirteen feet high, adjoined and partly built into by a cultivator's house. On the top one half, more or less, of a circular structure in masonry, some twelve feet in diameter, showed to a height of about four feet. The bricks, fairly hard, measured fourteen by ten inches, with a thickness of four and a half inches. On the east slope a straight edge of masonry, which seemed part of a base, was exposed at about five to six feet above the ground. The whole was suggestive of a small Stūpa ruin with its dome and square base, and a well sunk from the top showed that it had long ago been dug into for 'treasure'.

[5] At a point not very far above the debouchure and less than forty miles from the oasis Dr. Hedin measured in the third week of May a discharge of 318 cubic feet per second, a relatively large volume at so early a season; see *Central Asia and Tibet*, ii. p. 209.

[6] I was not aware at the time of Prejevalsky's earlier reference quoted below.

Mound of the *Tora.*

At the time of Prejevalsky's visit in 1876, when Charkhlik was still mainly a small convict settlement, the circumvallation is likely to have been in somewhat better preservation. 'On the site of the present village of Chargalyk,' he states, 'remains of mud walls of an ancient city, called *Ottogush-shari*, may be seen. These ruins are reported to be two miles in circumference, and watch-towers stand in front of the principal wall.'[7] But far more striking in appearance than the parts of the rampart still extant was the ancient mound known as the *Tora*, or tower, to which my attention was called, about one mile away to the north-west. There, some 300 yards from the left bank of the river in what is called 'Kurbān Bēg's Mahalla', rose a large and remarkably steep mound to a height of over fifty feet above the irrigated level. The layers of rubbish, with plentiful large stones exposed on its slopes, left no doubt about its artificial origin. On the top I could trace the much-dilapidated remains of a massive brick structure, about twelve yards in diameter. Its masonry on the north side was exposed to a height of twelve feet. The bricks had weathered badly, and only their thickness and width, four and twelve inches respectively, could be made out with certainty.

Mound formed by ancient rubbish.

There could be little doubt that these were the remains of a Stūpa dating from Buddhist times. But the mound below was far too large to be formed by the débris of any single structure, and the strata of rubbish composing it, where laid bare by cuttings, distinctly suggested an origin from prolonged occupation, reaching back probably to prehistoric periods. Examining the layers cropping out on the steep slope above an irrigation channel which had been cut into the south foot of the mound, I was vividly reminded of the observations that I made in 1904 on the large mound of Shōrgalai, near Thal, in Balūchistān.[8] The ancient refuse mixed with the stones contained much dung and reed straw, and was being regularly dug away for manuring, just like the *khaura* earth of ancient mounds along the Indian North-West Frontier. It is likely that this practice may have led to the disappearance of other and smaller mounds within the cultivated area.

Modern settlement occupies ancient area.

Nowhere around Charkhlik did I hear of the existence of such débris-covered 'Tatis' as would seem to belong to areas of ancient occupation that had been subjected to far-advanced wind-erosion.[9] Nor were any of the small antiques so commonly found on such ground forthcoming for sale here. We may, I believe, safely conclude from these negative facts, and from the position of the old town walls in the middle of the present oasis, that the new settlement approximately occupies the same ground as the precursors of the modern Charkhlik. At the same time this absence of visible proofs of erosion and denudation makes it difficult for me to believe that the period of complete abandonment, which certainly preceded the creation of the existing oasis, could have been a very protracted one. Had the site been abandoned before mediaeval times, the erosive forces ever at work, as we shall see, in this wind-swept Lop-nōr region would scarcely have failed to denude the soil, at least in parts, right down to the Piedmont gravel, and to efface completely those far from massive walls. These observations will explain why, in order to trace the history of Charkhlik, it will be safest to start from the later, and deal afterwards with the earlier, notices.

[7] See *From Kulja to Lob-nor*, p. 76. 'Ottogush' is explained in a note as the name of a former Khān of this place.

[8] Cf. Stein, *Archaeol. Survey Report, N. W. F. P.*, 1905, pp. 53 sq.

[9] The ancient sites of Koyumal and Bash-Royumal, which I visited and explored in January 1914, lie some distance from the southern edge of the present oasis. They are not of the 'Tati' type, and the second, near the left river bank, occupies ground which could never have been under cultivation. Both sides go back to T'ang times, and I much regret not to have learned of their remains on my first visit to Charkhlik in 1906–7.

SECTION V.—LIST OF OBJECTS FOUND OR EXCAVATED AT CHARCHAN AND VĀSH-SHAHRI

OBJECTS FOUND AT, OR OBTAINED FROM, CHARCHAN SITES

Char. 001. Pottery fr. from neck of vase, hand-made, of ill-levigated clay, hard-fired on an open hearth. Slightly everted lip with well-moulded rim. On shoulder, traces of incised orn. $3\frac{1}{16}'' \times 2'' \times \frac{2}{5}''$.

Char. 002. Pottery fr., hand-made, of ill-levigated clay, fired on an open hearth. $2\frac{5}{16}'' \times 1\frac{1}{8}'' \times \frac{1}{2}''$.

Char. 003. Pottery fr., wheel-made; body of pale yellow colour, exterior face light red. $2\frac{1}{8}'' \times 1\frac{7}{16}'' \times \frac{5}{16}''$.

Char. 004. Pottery fr. of handle, hard-fired ill-levigated red clay, orn. with vertical band of single circles between two border lines. Length $1\frac{5}{8}''$.

Char. 005. Pottery fr., hand-made, of ill-levigated clay, hard-fired on an open hearth, orn. with single incised line; interior of fr. red; faces black. Gr. M. $1\frac{3}{8}''$, thickness $\frac{1}{4}''$.

Char. 006. Pottery fr., hand-made, of ill-levigated clay, dark red with black exterior face. Much sand-worn. $2\frac{3}{8}'' \times 1\frac{5}{16}'' \times \frac{3}{8}''$.

Char. 007. Pottery fr., hand-made, of ill-levigated clay, fired on an open hearth, dark red with black exterior face. Much sand-worn. $2\frac{1}{4}'' \times 1\frac{15}{16}'' \times \frac{5}{16}''$.

Char. 008. Lapis-lazuli pendant, flat triangular, broken through suspension hole near apex. H. $1\frac{1}{4}''$.

Char. 009. Bead of white jade, oblong, flat-sided and round-edged. Found 21. xi. 06. $\frac{1}{2}'' \times \frac{3}{8}'' \times \frac{1}{4}''$.

Char. 0010. Agate bead, half lentoid, white and brown. Found 21. xi. 06. Diam. $\frac{1}{4}''$ to $\frac{7}{16}''$.

Char. 0011. Cornelian bead, spheroid, chipped, artificially striped with white as Yo. 00125 and Khot. 02. q. and r. Found 21. xi. 06. Diam. $\frac{5}{16}''$.

Char. 0012. Pear-shaped glass pendant, pale blue, now iridescent. Broken at hole. Found 21. xi. 06. $\frac{7}{16}'' \times \frac{5}{16}'' \times \frac{3}{16}''$.

Char. 0013. Turquoise matrix, irregular fr. Found 21. xi. 06. Gr. M. $\frac{9}{16}''$.

Char. 0014. Bronze hinge for tongue of strap-buckle. At end, two eyes for axis; tongue missing. Hollow behind with two rivets for attachment to strap. Found 21. xi. 06. $1\frac{1}{4}'' \times \frac{9}{16}''$.

Char. 0015. Loop of bronze buckle, D-shaped, hollow behind, with two rivets for attachment to belt. Found 20. xi. 06. $\frac{7}{8}'' \times \frac{9}{16}''$.

Char. 0016. Loop of bronze buckle, like Char. 0015. Three rivets. Found 20. xi. 06. $1'' \times \frac{5}{8}''$.

Char. 0017. Bronze strap-link (?). Rectang., flat, with oblong hole. No rivets. Found 20. xi. 06. $\frac{15}{16}'' \times \frac{9}{16}''$.

Char. 0018. Strip of bronze widening at each end. Towards one end, triangular hole; at other, short tongue in middle and short pointed projection each side. Cf. L. A. 0051. Found 20. xi. 06. $2\frac{3}{16}'' \times \frac{1}{2}''$ to $\frac{5}{16}'' \times \frac{1}{8}''$.

Char. 0019. Part of bronze buckle. Flat square plate with oblong opening. Edges bevelled. Behind flat, with rivet at each corner (two broken). Cf. Char. 0015. Found 20. xi. 06. $1\frac{1}{16}'' \times 1\frac{3}{16}'' \times \frac{1}{16}''$.

Char. 0020. Fr. of plate bronze. Two edges intact, meeting at acute angle, others broken. On face solid boss, pierced laterally and round it ring in low relief. Outside pattern (or letters ?) in low relief. Found 20. xi. 06. Gr. M. $1\frac{9}{16}''$, thickness $\frac{1}{16}''$.

Char. 0021. Fr. of plate bronze with (broken) hoop at one end. Part of buckle. Found 20. xi. 06. Gr. M. $1\frac{1}{4}''$.

Char. 0022. Nodule of iron ore, prob. meteoric (?). $1'' \times \frac{1}{2}''$.

Char. 0023. Blown glass fr., opaque green. Gr. M. $\frac{3}{4}''$.

OBJECTS FOUND OR EXCAVATED AT VĀSH-SHAHRI SITE

V.S. 001. Pottery frs. in two pieces (joined) from circular cover (?). Hand-made, of ill-levigated clay and fired on an open hearth, orn. with concentric bands of stamped orn. chiefly produced by blunt four-toothed stamp; one band of single stamped circles occurs. $4\frac{1}{4}'' \times 2\frac{1}{2}'' \times \frac{1}{2}''$. Pl. IV.

V.S. 002. Pottery fr., dark red-burning clay, hand-made; orn. with incised horizontal bands, below and above which is sharp-pointed comb-drawn festoon pattern, inverted, above bands. $3\frac{1}{2}'' \times 2\frac{1}{8}'' \times \frac{3}{8}''$.

V.S. 003. Pottery fr., brownish-grey clay, hand-made, fired on an open hearth, incised orn. of curves radiating from oval; prob. lotus-flower. $3\frac{3}{8}'' \times 2\frac{1}{2} \times \frac{3}{8}''$.

V.S. 004. Pottery fr., hard-fired, hand-made; dark red clay with black face (worn), orn. with incised wave pattern. $2\frac{1}{4}'' \times 1\frac{3}{8}'' \times \frac{3}{8}''$.

V.S. 005, a–i. Nine blown-glass frs., opaque jade-green. Found 30. xi. 06. Gr. M. $1\frac{3}{8}''$, thickness $\frac{1}{16}''$.

V.S. 006, a–b. Two blown-glass frs., opaque green, imitating jade, from necks of vessels. A crinkled ribbon of glass ($\frac{3}{4}''$ and $\frac{5}{8}''$) applied to each. Found 30. xi. 06.

(*a*) inside diam. $\frac{11}{16}$″, thickness $\frac{1}{8}$″; (*b*) $\frac{3}{4}$″ × $\frac{1}{2}$″, thickness $\frac{1}{16}$″.

V.S. 007, a–b. Two beads. Found 30. xi. 06. (*a*) ovoid 'nasturtium-seed' bead of mixed blue and green glass, $\frac{1}{2}$″ × $\frac{1}{4}$″; (*b*) flat pear-shaped pendant of crystal, $\frac{11}{16}$″ × $\frac{1}{2}$″ × $\frac{1}{4}$″.

V.S. 008. Fr. of yellow quartzite, roughly shaped with one rounded end, other broken. Found 30. xi. 06. 2″ × 1$\frac{1}{4}$″ × *c.* $\frac{3}{8}$″.

V.S. 009. Pottery fr., chipped round and pierced for use as spinning-whorl. Light brown clay. Found 30. xi. 06. Diam. 1″, thickness $\frac{1}{4}$″.

V.S. 0010. Pottery fr., converted into spinning-whorl as V.S. 009. Red clay. Found 30. xi. 06. Diam. 1$\frac{1}{8}$″, thickness $\frac{5}{16}$″.

V.S. 0011. Pottery fr. from bowl (?); hard buff body with thick opalescent glaze of bluish green dappled with grey. Chinese ware prob. made at Chin-chou in the time of Sung dynasty. Found 30. xi. 06. 1$\frac{1}{4}$″ × $\frac{3}{4}$″ × $\frac{3}{8}$″.

V.S. 0012–0013. Two frs. of rim of stoneware bowl; grey porcellaneous body with opalescent glaze, thin at the rim and thickening as it flows downwards, passing in colour from a pale brown at the edge into a dove grey; finely crackled. Chinese Chin-chou ware of the Sung dynasty. Found 30. xi. 06. 1″ × $\frac{13}{16}$″ × $\frac{3}{16}$″.

V.S. 0014. Fr. of stoneware bowl (?); grey porcellaneous body with thick smooth glaze of dove-grey tint. Chinese Chin-chou ware of the Sung dynasty. Found 30. xi. 06. Gr. M. 1$\frac{1}{16}$″, thickness $\frac{3}{16}$″.

V.S. 0015. Fr. of stoneware bowl (?); grey porcellaneous body with thick, faintly crackled, glaze of dull pea-green tint. Chinese Chin-chou ware of the Sung dynasty. Found 30. xi. 06. Gr. M. 1$\frac{5}{16}$″, thickness $\frac{3}{16}$″.

V.S. 0016. Fr. of stoneware vase, fine buff clay covered on outside with thick mottled glaze of deep olive-brown. Found 30. xi. 06. Gr. M. 1″, thickness $\frac{3}{16}$″.

V.S. 0017. Fr. of vase of fine grey clay, covered on outside with dull dark bronze-grey glaze. Chinese. Found 30. xi. 06. Gr. M. $\frac{7}{8}$″, thickness $\frac{1}{6}$″.

V.S. 0018. Fr. of rim of vase, buff clay, covered on each side with dark brown glaze. Chinese. Found 30. xi. 06. 1$\frac{5}{8}$″ × 1$\frac{1}{4}$″ × $\frac{1}{8}$″ to $\frac{1}{6}$″.

V.S. 0019. Fr. of vase, buff clay with mottled olive-brown glaze on outside. Chinese. Very similar to the modern 'tea-dust' glaze which is stated to be an 18th-century invention. Found 30. xi. 06. Gr. M. 2$\frac{1}{4}$″, thickness $\frac{1}{6}$″.

V.S. 0020. Fr. of rim of vase, buff clay. Rim bends out a little. A thin smear of transparent glaze under the lip. Chinese. Found 30. xi. 06. 1$\frac{1}{4}$″ × $\frac{7}{8}$″ × $\frac{1}{8}$″.

V.S. 0021. Fr. of rim of vase, buff clay, covered on each side with thin chocolate glaze. Chinese, prob. Sung dynasty. Found 30. xi. 06. 1″ × $\frac{7}{8}$″ × $\frac{1}{8}$″.

V.S. 0022. Fr. of high base-ring of small vase; grey stoneware, outside unglazed, circle of brownish green celadon glaze in middle of inside. Chinese, prob. Sung dynasty. Found 30. xi. 06. Diam. 1$\frac{5}{8}$″, h. $\frac{5}{8}$″, thickness of vase $\frac{3}{16}$″ to $\frac{1}{12}$″.

V.S. 0023. Fr. of plate of grey porcellaneous clay with thin transparent celadon green-grey glaze on both sides; on interior, moulded floral orn. in relief. Chinese, prob. Sung dynasty. Found 30. xi. 06. Gr. M. 1$\frac{3}{4}$″, thickness $\frac{3}{16}$″.

V.S. 0024, a–g. Seven blown-glass frs., jade-green more or less opaque. Found 30. xi. 06. Gr. M. 1$\frac{3}{8}$″, thickness $\frac{3}{8}$″ to *c.* $\frac{1}{32}$″.

V.S. 0025. Handle of glass vessel, part of, opaque green, curved, elliptical in section. Found 30. xi. 06. Length $\frac{7}{8}$″, diam. *c.* $\frac{3}{8}$″.

V.S. 0026, a–d. Four glass beads: (*a*) cylindrical, opaque blue. Diam. $\frac{3}{8}$″; (*b*) ring, opaque blue. Diam. $\frac{3}{16}$″; (*c*) cube with corners bevelled, dark blue, translucent. Diam. $\frac{1}{4}$″; (*d*) spheroid, brown, translucent. Diam. $\frac{1}{4}$″.

V.S. 0027. Stick of Chinese ink, octagonal in section, tapering. Cf. Kök-kum, 008. Found 30. xi. 06. 2″ × $\frac{5}{16}$″.

V.S. 0028. Jade pendant, flat, oblong, light green. Found 30. xi. 06. $\frac{3}{4}$″ × $\frac{3}{8}$″ × $\frac{1}{4}$″.

V.S. 0029. Glass fr., opaque brown, slightly concave. On concave side a raised line. Found 30. xi. 06. Gr. M. 1″, thickness $\frac{1}{8}$″.

V.S. 0030. Fr. of sulphur-coloured stone. Found 30. xi. 06. Gr. M. 1$\frac{1}{4}$″.

V.S. 0032. Quartz fr. (?), bluish-white (upper surface convex, lower concave, worked): part of orn. Length $\frac{11}{16}$″.

V.S. 0034. Fr. of red cornelian. Gr. M. $\frac{3}{4}$″.

V.S. 0035. Bronze boss, part of, hollow with flat scalloped edge. In centre, hole, diam. $\frac{1}{8}$″. Diam. *c.* 1$\frac{1}{2}$″.

V.S. 0036. Bronze weight, half of. Flat top and bottom with eight sides from which corners have been bevelled. Diam. each way $\frac{5}{8}$″.

V.S. 0037. Bronze weight similar to V.S. 0036, but smaller and complete. Diam. $\frac{3}{8}$″ × $\frac{7}{16}$″.

V.S. 0038. Paste bead, fr. of cylindrical (?), with turquoise blue glaze inside and out. Length $\frac{9}{16}$″.

V.S. 0039. Fr. of ruby matrix. Gr. M. $\frac{5}{8}$″.

V.S. 0040. Paste bead, half of ring, yellow. Diam. $\frac{3}{8}$″.

V.S. 0041. Wooden comb with two rows of teeth. One row has twenty-five teeth to 1″; the other seven. Concave ends. Cf. F. II. 001. 3$\frac{1}{2}$″ × 2$\frac{1}{4}$″ × $\frac{7}{16}$″.

V.S. 0042. Bronze slag, small round lump. Diam. $\frac{5}{16}$″.

V.S. 0043, a–m. Twelve nondescript bronze frs. Gr. M. 1$\frac{3}{8}$″.

V.S. 0044. Tongue of bronze with snake's (?) head at end. Square in section; broken end flattened. Length $2\frac{1}{16}$", diam. $\frac{3}{16}$".

V.S. 0045. Bronze catch for loop of buckle. Orn. with three longitudinal channels sunk below the average level, and a border at each edge raised above it. Folded end plain, other end broken. Found 1. xii. 06. 1" × $\frac{7}{16}$".

V.S. 0046. Folded strip of bronze, ends held together by iron pin. $\frac{9}{16}$" × $\frac{3}{8}$".

V.S. 0047. Bronze arrow-head, tip of, like N. xiv. 008. Broken. Length $\frac{7}{16}$".

V.S. 0048. Pointed bronze fr., possibly arrow-head. Broken. Section triangular, solid. $\frac{11}{16}$" × $\frac{1}{4}$".

V.S. 0049. Flattened bronze wire bent into loop; ends broken. Possibly part of hair-pin like V.S. 0053. Length of loop $\frac{5}{8}$", thickness of wire $\frac{1}{8}$".

V.S. 0050. Bronze fr., possibly flange of arrow-head like N. xiv. 008. $\frac{7}{8}$" × $\frac{1}{4}$".

V.S. 0051. Bronze fr., crumpled edge of sheet. $2\frac{3}{4}$" × $\frac{1}{2}$" × $\frac{1}{32}$".

V.S. 0052. Silver relief orn. from belt strap (?); oblong hollow case with one end closed (rounded), other (square) open, and lead filling up to $\frac{3}{8}$" from open end. Through orn. there are two holes, one retaining head of rivet for attachment to end of belt (?). Design apparently a tree with leaves and flowers (?); Chinese style. Back plain. Traces of fire. $1\frac{13}{16}$" × $1\frac{3}{8}$" × $\frac{3}{16}$".

V.S. 0053. Bronze hair-pin (?), two prongs bent over in loop to hold tresses, and elaborated into seven close curves making flat end. Diam. of wire $\frac{1}{10}$", length of loop $1\frac{3}{4}$".

V.S. 0060. Elliptical bronze ring, possibly for binding knife-handle. $\frac{5}{8}$" × $\frac{1}{2}$".

V.S. 0061. Wooden disc, roughly cut. Diam. $1\frac{1}{4}$", thickness $\frac{1}{8}$".

CHAPTER IX

HISTORICAL NOTICES OF LOP, SHAN-SHAN, AND LOU-LAN

Section I.—MARCO POLO'S LOP AND HSÜAN-TSANG'S NA-FU-PO

Charkhlik Marco Polo's Lop.

IN tracing early records of Charkhlik we cannot expect help from the name of the resuscitated oasis, for that is of avowedly modern origin.[1] But if we keep clearly in view the central fact that this oasis must have been, in old days as now, the chief place where a settled agricultural population could maintain itself near the southern edge of Lop-nōr, it is easy enough to recognize that Charkhlik must be meant by Marco Polo's town of Lop. His first reference to it and the 'province called Lop', which he reached after quitting Charchan, we have already discussed.[2] 'Lop is a large town at the edge of the Desert, which is called the Desert of Lop, and is situated between east and north-east. It belongs to the Great Kaan, and the people worship Mahommet. Now, such persons as propose to cross the Desert take a week's rest in this town to refresh themselves and their cattle; and then they make ready for the journey, taking with them a month's supply for man and beast. On quitting this city they enter the Desert.'[3]

Marco Polo's 'province of Lop'.

Marco Polo's subsequent description of the route which took him through this desert to 'the city called *Sachiu*' or Sha-chou we shall have occasion to trace in detail further on. There is no doubt that he travelled along a line practically the same as that now followed by the caravan track through the desert from Charkhlik to Sha-chou or Tun-huang.[4] It is equally certain that by the 'province called Lop' he must mean the aggregate of inhabited places near the Lop-nōr marshes and on the lower Tārīm, just as the term *Lop* or *Lob* is used at the present day throughout Eastern Turkestān.[5] Now for the location of Marco's town of Lop, which shared the name of the 'province' and may be assumed to have been its chief place,[6] three sites come into consideration. These are, proceeding from west to east, Vāsh-shahri, Charkhlik, and Mīrān. They are the only places of this region where physical conditions would permit of cultivation having existed within historical times to the extent presupposed by a town, however small.

[1] Cf. Hedin, *Reisen in Z.-A.*, pp. 108, 169. The traditional derivation of the name there given, from a *charkh* or 'spinning-wheel', which the first new settlers are said to have found among some ruins there, is plausible enough. The Persian term *charkh* is well known in the Turkī of the Tārīm Basin; see Shaw, *Turki Language*, p. 98. I have adopted the traditional spelling of the name, though in actual local pronunciation it sounds usually more like *Charklik* or *Chāklik*. The latter form is due to *r* becoming almost inaudible, in accordance with a phonetic change common in Turkī speech from Khotan eastwards, and to complementary lengthening affecting the preceding vowel.

[2] See above, p. 308.

[3] See Yule, *Marco Polo*, i. p. 196.

[4] Cf. below, chap. xiv, sec. iii.

[5] Cf. Forsyth, *Yarkand Mission Report*, p. 51; Yule, *Marco Polo*, i. p. 195; Hedin, *Reisen in Z.-A.*, p. 109. It is true that present local usage in this tract restricts the name *Lop* to a small fishing settlement situated near where the terminal course of the Tārīm makes its great bend to the east (Map No. 57. B. 2). But the general use of the term *Loplik* or 'people of Lop' for the descendants of the riverine population of fishermen, a use shared by themselves, conclusively proves the age of the wider application of the term. The Mongol name *Lop-nōr*, 'lake of Lop', adopted by Chinese and European cartographers for the whole complex of the terminal marshes of the Tārīm, also presupposes this general application.

[6] Cf., e.g., Marco Polo's distinct mention of 'Cotan' and 'Cascar' as the greatest town of the 'provinces' of Khotan and Kāshgar; Yule, *Marco Polo*, i. pp. 181, 188.

Desert route beyond 'town of Lop'.

At all three, earlier settlements are attested by ruins. But closer examination shows that neither Vāsh-shahri nor Mīrān can lay claim to represent the Venetian's 'town of Lop'. His account states that travellers proposing to cross the desert used to halt here for a week 'to refresh themselves and their cattle'. 'On quitting this city they enter the Desert.' Now from what has been said above of the relative importance of the settlements actually extant at Vāsh-shahri and Charkhlik, and of the respective size of the rivers upon which their existence depends, it follows that Charkhlik, with its far more ample supply of water and much greater area of cultivation, could not possibly have been an abandoned waste at a period when Vāsh-shahri was still an oasis, as Marco's reference implies. The route from Charchan to Sha-chou or Tun-huang must always have passed through Charkhlik, and if the 'town of Lop' were to be placed at Vāsh-shahri, it would be impossible to explain why Marco Polo should have described it as the last halting-place of the caravans starting for the month's desert journey to Sha-chou.

Mīrān abandoned before Marco Polo.

At first sight his description would seem to fit Mīrān far better; for it lies two marches beyond Charkhlik on the direct route towards Tun-huang and on the edge of absolutely bare gravel desert.[7] But here again identification with Marco's 'town of Lop' is precluded by the result of my excavations.[8] These have brought to light conclusive archaeological evidence showing that the ruins of Mīrān were abandoned centuries before the Mongol period. Even if we assume that some modest cultivation survived by the side of the Jahān-sai River, as it now exists at a distance from the ancient site, this could not have sufficed for a town, nor furnished the resources which caravans preparing there for a long desert journey would have regularly needed.

Charkhlik since Marco Polo's passage.

Thus we are forced to conclude that the place meant by Marco Polo's 'town of Lop' must be located at the Charkhlik oasis. With this conclusion the character and present appearance of the ruined circumvallation is in agreement.[9] How long after Ser Marco's passage the 'town' and oasis were abandoned we do not know. It is very unlikely that they retained their importance after the middle of the fourteenth century, when, with the downfall of the Mongol dynasty, China reverted to the old policy of seclusion, and free intercourse and trade with Central Asia ceased. At the beginning of the fifteenth century, as we know from a statement of Shāh Rukh's embassy, the southern route through the desert was unfrequented.[10]

Mīrzā Ḥaidar's mention of Lop.

About the same period Lop is mentioned among the waste places where Vais Khān, a Moghul chief, was believed to have hunted wild camels.[11] Mīrzā Ḥaidar, who records this about the middle of the sixteenth century, knew Lob merely as the name of a ruined town situated somewhere in the south-eastern part of the Tārīm Basin. 'To the east and south of Kashghar and Khotan are deserts, which consist of nothing but heaps of shifting sands, impenetrable jungles, waste lands, and salt-deserts. In ancient times there were large towns in these [wastes], and the names of two of

[7] See below, p. 346.

[8] Sir Henry Yule was guided by a just topographical sense when he conjectured (in a note contributed to Prejevalsky, *From Kulja to Lob-nor*, p. 77, note 4) that Marco Polo's city of Lop might be located at what Prejevalsky briefly mentions as the 'traces of a third very large city near Lob-nor, at a place called merely *Kunia-shari*, i.e. old town'. Prejevalsky's map shows that the Mīrān ruins are meant, and on the strength of Sir Henry Yule's conjecture our maps have since continued to show them as 'Ruins of old Lob'. It was reserved for the spade to prove that the main ruins of Mīrān must have been deserted for many centuries before Marco Polo's caravan passed them.

[9] That Marco Polo's town of Lop corresponds to the present Charkhlik was first recognized by M. Grenard, who, though he did not visit the ground himself, has correctly emphasized the importance of Charkhlik as the only possible site for a larger settlement at the crossways of several great routes; cf. *Mission Dutreuil de Rhins*, iii. pp. 149 sq. There is much justice, too, in the remark that he adds: 'Il me paraît absolument certain que toutes ces anciennes villes entre Khotan et le Lob nor étaient de pauvres bourgades qui n'ont acquis quelque célébrité que parce qu'elles étaient pour les voyageurs des étapes obligées, clairsemées dans l'étendue déserte.'

[10] Cf. Yule, *Cathay*, i. p. ccxi; also cxxxiv; and below, chap. XIV, sec. iii.

[11] Cf. Elias and Ross, *Tārīkh-i-Rashīdī*, p. 67.

them have been preserved, namely Lob and Katak; but of the rest no name or trace remains; all are buried under the sand.'[12] The name *Lop* was all that survived during the centuries which followed until cultivation was once more resumed at the site of Charkhlik. We have already seen that the name had both a wider and a more confined local application, and it is, perhaps, not mere chance that the small fishermen's village, some thirty-six miles to the north of Charkhlik, which is now specifically known as *Lop* (Map No. 57. B. 2), is among all the settlements of the Lopliks or 'Lop people' the one nearest to the 'town of Lop', as Marco Polo knew it.

Use of Khotan-Sha-chou route after T'ang times.

I can find no distinct and certain reference to the Charkhlik oasis in such historical records as we possess of the Tārīm Basin during the five centuries which intervened between the close of T'ang control of that region and Marco Polo's passage about A.D. 1273–4. But that the great southern route from Khotan to Sha-chou, which passed through it, must have been in use during this long period, at least intermittently, is proved by the numerous embassies from Khotan to the Chinese Imperial Court of which the Annals from the accession of the Posterior Chin to the close of the Sung Dynasty (A.D. 936–1126) have preserved us some records.[13] An account of the route followed is, however, only given in the case of the return mission which the Emperor Kao-tsu dispatched to Khotan in A.D. 938.[14] From this we see that the mission after leaving Sha-chou must have travelled westwards, not by the route through the desert, but by the alternative one which skirts the high northern slopes of the Āltin-tāgh between Nan-hu and Bāsh-kurghān, and, after descending towards the Lop-nōr depression, joins the former route near Mīrān.[15] We shall discuss this route presently. The territory crossed west of Sha-chou is described as held by the tribe of the Chung-yün. The mission on its progress is said to have arrived at the 'town of Ta-t'un', and physical conditions make it difficult to look for a 'town' elsewhere than at the foot of the mountains. But whether Charkhlik or some oasis further west is meant cannot be determined.[15a]

Sha-chou-Khotan route in T'ang Annals.

Safe ground is again reached for tracing the earlier history of Charkhlik in a record of the T'ang period. The itinerary given by the T'ang Annals for the route from Sha-chou to Khotan, of which M. Chavannes has published extracts,[16] informs us that '300 li to the south of the lake *P'u-ch'ang* 蒲昌 (Lop-nōr) is the garrison of *Shih-ch'êng* 石城 or the "Stone Town"; this is the kingdom of *Lou-lan* 樓蘭 of the Han epoch; it is also called *Shan-shan* 鄯善; 200 li further west one reaches *Hsin-ch'êng* or the "New Town".'[17] Hsin-ch'êng, as we have already shown from the evidence furnished by the subsequent itinerary to Chü-mo or Charchan, must be identified with Vāsh-shahri.[18] It appears to me equally certain that the 'Stone Town' is to be located at Charkhlik.[19] I am led to this identification not only by the distance of 200 li counted eastwards from the 'New Town' or Vāsh-shahri, but also by the reckoning of 300 li south of Lop-nōr; three daily marches aggregating over 64 miles are reckoned now from Charkhlik to Abdal on the Tārīm, near which the westernmost part of the Lop-nōr marshes may be said to begin.

Location of T'ang Annals' 'Stone Town'.

Special importance must be attached to the definite statement that the place was also called

[12] Cf. Elias and Ross, *Tārīkh-i-Rashīdī*, p. 295. The name *Katak*, which Mīrzā Ḥaidar repeatedly couples with Lob (see also *ibid.*, pp. 10, 52, 64, 406), and which has been discussed by Mr. Elias, *ibid.*, pp. 11 sq., note, is in all probability connected with the term *kötek-shahri*. This is still generally applied in a vague fashion to any ruins or 'old towns' (*kōne-shahr*), existing or imagined to exist in the desert, throughout the eastern portion of the Tārīm Basin; cf. below, chap. XII, sec. i. There seems good reason to assume that the term is derived from the word *kötek*, applied to the dead trees which are so abundant along dry river-courses and elsewhere in the desert.

[13] Cf. Rémusat, *Ville de Khotan*, pp. 73-100.

[14] Cf. regarding this mission also *Ancient Khotan*, i. p. 178.

[15] See Maps Nos. 61, 64, 65, 68, 71, 75, 79.

[15a] For *Ta-t'un* cf. also above, p. 299, note 36.

[16] See above, p. 298, note 32; 306, note 4; App. *A*.

[17] Cf. Chavannes, *Voyage de Song Yun*, p. 13, note.

[18] See above, p. 306.

[19] The identity of the 'Stone Town' with Charkhlik has been correctly recognized already by Dr. Herrmann; cf. *Seidenstrassen*, p. 100. See also *Desert Cathay*, i. p. 345.

Shan-shan, and was identified with the Lou-lan of the Han epoch; for this makes it clear that Charkhlik was already considered in T'ang times as the chief place of the whole Lop region, as it undoubtedly is at the present day. The questions as to the original application of the names of Shan-shan and Lou-lan will be considered in detail further on. But as regards the Chinese designation of 'Stone Town', which is not otherwise known, I may at once state my belief that it may well have been connected with the presence of large stones in the ancient mound known as *Tora*.[20] This stone material, evidently brought from a distance and in T'ang times, perhaps, found also in other mounds which have since disappeared, was bound to attract special attention on this alluvial flat which elsewhere only showed a uniform surface of loess or, outside the oasis, fine gravel and sand.

Hsüan-tsang's mention of *Na-fu-po*.

It is regrettable that the T'ang records dealing with the Tārīm Basin, as far as they have been made accessible by M. Chavannes' translation, do not include a special notice on Shan-shan or the Lop tract, even though the 'kingdom of Shan-shan' is twice mentioned along with Kuchā, Kara-shahr, Charchan (Chü-mo), etc., among the territories of Eastern Turkestān which, about A.D. 639, acknowledged allegiance to a certain paramount chief of the Western Turks.[21] But fortunately Hsüan-tsang's route on his return from Khotan to China in A.D. 644–5 passed through this district, and to this fact we owe the brief but interesting notice which is the very last in the pilgrim's long itinerary.[22] From the old territory of *Chê-mo-t'o-na* or Chü-mo, corresponding to Charchan, 'he continued his journey', so the *Hsi-yü-chi* tells us, 'for about a thousand li to the north-east, and arrived at the old territory of *Na-fu-po* 納縛波, which is the same as the old *Lou-lan* country'.

Na-fu-po corresponds to Charkhlik.

That the locality thus briefly mentioned corresponds to the present Charkhlik is made clear by the distance and bearing, both of which agree with the present route from Charchan to Charkhlik.[23] There was no other practicable route which the pilgrim could have followed on his way from Charchan to Sha-chou.[24] To the importance to be attached to Hsüan-tsang's identification of his *Na-fu-po* with the ancient Lou-lan I shall recur presently. But what calls for our immediate attention is the name *Na-fu-po* itself. In no other Chinese record is this designation met with, a circumstance which naturally suggests the assumption that Hsüan-tsang has preserved here, as often elsewhere, the phonetic rendering of a name in actual local use, and not some traditional or literary appellation.

Na-fu-po transcribes *Lop*.

No satisfactory etymology has been given by Hsüan-tsang's commentators for the name which the Chinese transcript *Na-fu-po* was intended to render.[25] The conjectured original form **Navapa* may 'look like Sanskrit', but certainly has no meaning. Sir Henry Yule was guided by a happier philological instinct when he surmised that a derivative of the indigenous name meant by Hsüan-tsang's *Na-fu-po* may be found in the *Lop* of Marco Polo and modern local nomenclature.[26] Striking confirmation for this conjecture has been furnished by the Tibetan records on wood and paper which my excavations brought to light in such abundance from the ruined fort of Mīrān. The origin, date, and general character of these records will be discussed in a subsequent chapter.[27]

[20] See above, p. 314.

[21] Cf. Chavannes, *Turcs occid.*, pp. 30, 57.

[22] See Julien, *Mémoires*, ii. p. 247; Watters, *Yuan Chwang*, ii. p. 304.

[23] The identity of Hsüan-tsang's Na-fu-po with Charkhlik appears to have been recognized by M. Grenard (see *Mission D. de Rhins*, ii. p. 61) and probably by others also; but I cannot find any definite statement of it before my reference in *Desert Cathay*, i. p. 343.

[24] Sha-chou is distinctly mentioned in Hsüan-tsang's biography as the first town reached by the pilgrim within the Chinese border; see Julien, *Vie*, p. 290; Beal, *Life*, p. 212. The mention there made of the change from camel and pony transport to carts before reaching Sha-chou is significant, and points distinctly to the desert route having been followed.

[25] For suggestions, cf. e.g. Julien, *Mémoires*, ii. p. 247; Beal, *Si-yu-ki*, ii. p. 325, where Mr. Kingsmill's bold equation of **Navapa* = **Navapura*, i.e. Neapolis, is quoted.

[26] Cf. Yule, *Marco Polo*, i. p. 197, note; Wylie, *J. Anthrop. Inst.*, x. p. 24, note.

[27] See below, chap. XII, sec. v.

Here it must suffice to point out that they all belong to the period of Tibetan domination in Chinese Turkestān, which extended from approximately the last third of the eighth century to about the latter half of the ninth century A. D.

Tibetan *Nob* in Mīrān records.

In these documents the local name of *Nob* occurs with particular frequency, and since the context invariably shows that it must apply to localities identical with, or comprised in the same territory as, Mīrān, we may recognize in it the long-sought phonetic link between the form which Hsüan-tsang's *Na-fu-po* was intended to reproduce and the *Lop* of Marco Polo.[28] As I am neither a Sinologist nor a Tibetan scholar, I must hesitate to express any opinion as to whether the initial *l* of the mediaeval and modern name, or the initial *n* of its Chinese and Tibetan representative, indicates more correctly the original local pronunciation. But I may at least point out that whereas the change of initial Skr. and Pkr. *l* into *n* is common in a number of Modern Indo-Aryan vernaculars,[29] the opposite conversion of initial *n* > *l* is familiar to me in at least one dialectic pronunciation of the Chinese 'Mandarin' language.[30]

'Great Nob' and 'Little Nob'.

For a synopsis of the Tibetan records in which *Nob* is mentioned, I must refer to section v of chapter XII, which deals with the excavations in the ruined fort of Mīrān. To judge from the abstracts of documents which Dr. Francke has made available in translation, the most frequent references are to two localities, designated as 'Great Nob' (*Nob-ched*) and 'Little Nob' (*Nob-chung*) respectively. From a number of indications which the mention of the local name in addresses or the character of the context supplies, but which cannot here be discussed in detail, I conclude that the site of Mīrān, at which the documents were discovered, is meant by 'Little Nob'.[31] If this assumption is right, it is probable that 'Great Nob' must be identified with Charkhlik.

'Great and Little Nob' correspond to Charkhlik and Mīrān.

This distinction between 'Little' and 'Great Nob' corresponds to that which earlier texts indicate between the two main places of Shan-shan, *Yü-ni*, 'the Old Town', to the east, and *I-hsün*, or 'the New Town', these two being now represented, as I believe, by the sites of Mīrān and Charkhlik respectively.[32] In keeping with the character of the Tibetan occupation is the repeated reference made to several castles in Nob.[33] The mention once made of 'Lower Nob' shows that subdivisions other than 'Great and Little Nob' were also included in the district, just as in modern times the term Lop in general use comprises the whole region adjoining the terminal course of the Tārīm and bordered by the Kuruk-tāgh and Āltin-tāgh ranges.

SECTION II.—SHAN-SHAN BETWEEN T'ANG AND HAN TIMES

We may now resume the task of tracing back the history of the Lop region in the records available for the periods which preceded the re-establishment of Chinese control over the Tārīm Basin in T'ang times. Our task is considerably facilitated by the fact that the Lop-nōr tract lies on the oldest route connecting China with Central Asia, and that this route retained its importance for traffic even during those times when Chinese political power had ceased to assert itself in the 'Western Regions'.

[28] For the first record of this view, see *Desert Cathay*, i. p. 449. The identifications, however, there proposed for 'Great Nob' and 'Little Nob' were erroneous, having suggested themselves at a time when only a small portion of the materials was accessible in translation.

[29] Cf. Grierson, *Phonology of the Modern Indo-Aryan Vernaculars*, Z.D.M.G., ii, Bd. 50, 1916, p. 15. [For Chinese renderings of *l* by *n*, see now Pelliot, *J. Asiat.*, 1916, janvier-février, p. 119, note; also *J. Asiat.*, 1914, sept.-oct., p. 385.]

[30] The Hunanese accent, to which I grew accustomed in colloquial intercourse with Chinese officials and literati in Chinese Turkestān (cf. *Desert Cathay*, i. p. 143), seemed invariably to turn *nan* into *lan*, *ning* into *ling*, etc. I observed much the same in the rustic pronunciation of the districts which I visited in Kan-su.

[31] Cf. below, p. 467.

[32] See below, pp. 326 sq.

[33] Cf. documents M. I. iii. 7; iv. 132; viii. 10; x. 9; also below, chap. XII, sec. v.

Thus the important description of the three routes to the West compiled about A.D. 607 by the Chinese general and diplomat P'ei Chü clearly indicates that the southern route passed through Shan-shan, south of Lop-nōr, on to Yü-t'ien or Khotan.[1] As we are distinctly told that P'ei Chü collected his information from the foreigners visiting Kan-chou, it can scarcely be doubted that the application of the name *Shan-shan* to the Lop tract was actually known locally and was not merely the result of learned conjecture.

P'ei Chü calls Lop *Shan-shan.*

The same conclusion is justified in the case of the narrative of Sung Yün, who reached the town of Shan-shan in A.D. 519 after having travelled three thousand five hundred li westwards through the territory of the T'u-yü-hun.[2] As this people held the Koko-nōr region and the elevated plateaus west of it, Sung Yün must have travelled along the route which still leads from the Koko-nōr across Tsaidam down to Mīrān and Charkhlik.[3] 'The kings whom this town had [previously] owned have been conquered by the T'u-yü-hun; at present the ruler in this town is the second son of the [king of the] T'u-yü-hun; he has the title of the General Pacificator of the West and commands three thousand men whom he employs to stop the western Hu (barbarians).'

Sung Yün's mention of Shan-shan.

Sung Yün's account, brief as it is, is of considerable interest for our inquiry. It shows in the first place that the designation of *Shan-shan* was in actual use in the early part of the sixth century for the Lop tract; for a reference to the map and the study of his subsequent march westwards to Tso-mo or Charchan show that the route he followed from the Koko-nōr region could not have debouched from the mountains elsewhere than upon Mīrān and Charkhlik. The mention of the T'u-yü-hun conquest, which a notice of the *Pei shih* confirms for about A.D. 540 and extends to Charchan also,[4] is of further interest because it may yet help to explain the appearance, more than a century later, of that new name of the territory which Hsüan-tsang's *Na-fu-po* is intended to transcribe, and which we have traced through the *Nob* of the Tibetan records down to the modern *Lop*. Perhaps also the new name of *Cher-chen*, which first appears in the Tibetan records of Mīrān,[5] may be attributed to the change wrought by this T'u-yü-hun occupation. But whereas Charchan at the time of Sung Yün's passage counted only a hundred families,[6] the 'town of Shan-shan' must still have been a place of some size to serve as a royal residence, and the resources of its cultivated area must have been considerable to maintain a garrison of three thousand men. The friendly relations which prevailed in the early part of the sixth century between the T'u-yü-hun and the Northern Wei dynasty of cognate origin ruling in China,[7] explain why the T'u-yü-hun established at Shan-shan might be considered, in the eyes of a Chinese official mission, as an outpost of the Empire against the 'Western barbarians'.

T'u-yü-hun occupation of Charkhlik.

We may here conveniently take note of the account which Fa-hsien, the earliest of the Buddhist pilgrims from China to the Western regions, has left of Shan-shan.[8] He and four other monks, in the autumn of A.D. 400, started from the frontier territory of Tun-huang, 'in the suite of an envoy'. The prefect of Tun-huang 'had supplied them with the means of crossing the desert [before them], in which there are many evil demons and hot winds. Travellers who encounter them perish all to

Fa-hsien's journey to Shan-shan.

[1] See Ritter, *Asien*, v. p. 563, quoting from Neumann, *Asiatische Studien*, p. 196; also Richthofen, *China*, i. p. 530, note.

[2] Cf. Chavannes, *Voyage de Song Yun*, p. 12; concerning the T'u-yü-hun, cf. *ibid.* p. 11, note 5, and now also M. Pelliot's note in *J. Asiat.*, 1912, xx. pp. 520 sqq.

[3] See e.g. the Royal Geogr. Society's map of *Tibet and the surrounding regions*, 1904. The same route must have been followed also by the Indian Buddhist monk Jinagupta, but in the reverse direction, when about A.D. 557 he proceeded from Khotan to Hsi-ning; cf. *T'oung-pao*, 1905, p. 341. But his lamentably brief narrative does not specify the intermediate stages.

[4] See *Voyage de Song Yun*, p. 12, note 7; also above, p. 298.

[5] Found in document M. I. xxviii. 2.

[6] See Chavannes, *Voyage de Song Yun*, p. 13; also above, p. 297.

[7] See Chavannes' article, *Jinagupta*, *T'oung-pao*, 1905, p. 333.

[8] See Legge, *Travels of Fâ-hien*, p. 11 sqq.

a man. There is not a bird to be seen in the air above, nor an animal on the ground below. Though you look all round most earnestly to find where you can cross, you know not where to make your choice, the only mark and indication being the dry bones [left upon the sand].'

Fa-hsien's description of Shan-shan.

'After travelling for seventeen days, a distance, we may calculate, of about 1,500 li, [the pilgrims] reached the kingdom of Shen-shen (i. e., Shan-shan), a country rugged and hilly, with a thin and barren soil. The clothes of the common people are coarse, and like those worn in our land of Han, some wearing felt and others rough serge or cloth of hair;—this was the only difference seen among them. The king professed [our] law, and there might be in the country more than four thousand monks who were all students of the Hînayâna. The common people of this and other kingdoms [in that region], as well as the śramans, all practise the rules of India, only that the latter do so more exactly, and the former more loosely. . . . Here they stayed for about a month, and then proceeded on their journey, fifteen days' walking bringing them to the country of Woo-e.'

Fa-hsien's Shan-shan represents Charkhlik.

The description of the desert crossed by the pilgrims on the way from Tun-huang to Shan-shan agrees so closely with the details given by Marco Polo of his journey through the 'Desert of Lop', and with other early accounts of the desert route between Lop and Tun-huang, that no doubt can arise as to the route followed by Fa-hsien and his companions. Moreover, archaeological evidence conclusively proves that the old settlement north of the Lop-nōr marshes was by that time already abandoned, so that it seems certain that the Shan-shan forming Fa-hsien's goal was the Lop tract of which the remains of Mīrān and Charkhlik mark the chief sites. This location is consistent with the seventeen days' journey and the distance of 1,500 li that he gives; the actual marching distance, which we measured with the cyclometer, was close on 380 miles between Charkhlik and Tun-huang, or 332 miles between Mīrān and Tun-huang. The pilgrims' subsequent journey of fifteen days to Wu-i (Woo-e), with its north-westerly bearing, also confirms the identification; for there is good reason to believe that Fa-hsien's *Wu-i* 傷夷 is but a variant of the form *Wu-ch'i* 烏耆, which figures in Buddhist works as the designation of the *Yen-ch'i* 焉耆 of Chinese historical texts, corresponding to the present Kara-shahr.[9] The distance from Charkhlik to Kara-shahr by the map works out at about 280 miles, for which fifteen days' travel appears a very reasonable allowance, fourteen stages being counted on the present postal route between the two places.

Fa-hsien's description suits Charkhlik.

Fa-hsien's description of the country as 'rugged and hilly with a thin and barren soil' finds its explanation in the extensive mountain tract, towards the Chimen-tāgh and Gass Lake, which affords grazing for the large flocks of Charkhlik and is still included in the district. This also accounts for the prevalence of woollen clothing which the pilgrim mentions. The reference to the flourishing condition of Buddhism is interesting in view of the archaeological discoveries described below, and so is the mention of the four thousand Buddhist monks whom Fa-hsien found in the territory; for, however large relatively the monastic portion of the population may be in Buddhist countries like Tibet, it appears to me improbable that the modern Lop region, with its available agricultural resources, could possibly maintain this number of idlers. The progress of desiccation, with its consequent reduction of the productive area, seems to supply the only adequate explanation of the statement.

Li Tao-yüan's notice.

It is convenient to depart slightly from the strict chronological order in connexion with Fa-hsien's record; for in conjunction with Sung Yün's itinerary it helps to render more certain the interpretation of the important topographical data to be found in Li Tao-yüan's commentary on the 'Book of the Rivers', the *Shui Ching*. As the author died in A.D. 527, the latest date for the information it furnishes is approximately fixed in the time of Sung Yün. But there is good reason

[9] Cf. Watters, *Yuan Chwang*, i. p. 46. Mr. Watters' identification of *Wu-i* with Kara-shahr is confirmed by the evidence adduced by M. Chavannes in his remarks upon a passage of Li Tao-yüan's commentary on the *Shui ching* (see below), where Fa-hsien's notice is reproduced; cf. *T'oung-pao*, 1905, p. 564, note 2.

to think that much, if not most, of that information, as far as it concerns the Tārīm Basin, goes back to earlier periods, when Chinese knowledge of that region was much more intimate. In discussing above the history of Chü-mo or Charchan, Li Tao-yüan's notice of the river of A-nou-ta or Chü-mo has already been quoted from M. Chavannes' translation.[10] The information about Shan-shan or Lou-lan is given to supplement that notice.[11]

Li Tao-yüan places Shan-shan S. of Tārīm.

After the river of Chü-mo (or Charchan-daryā) and the 'River of the South' (i. e. the Khotan River merged in the Tārīm) have effected their junction, they are said to flow eastwards under the name of the *Chu-pin* 注賓河 River. 'The Chu-pin River further east passes north of the kingdom of *Shan-shan* 鄯善. The capital [of this kingdom] is the town of *I-hsün* 伊循. This was at one time the territory of *Lou-lan* 樓蘭.' It is important to note the bearing of the topographical indications here given. They prove that at the period from which Li Tao-yüan's information dated, and apparently earlier also, the main territory of Shan-shan, along with its capital I-hsün, must have been situated to the south of the course of the Tārīm as it flowed eastwards after its junction with the Charchan River. Reference to the map shows that this description tallies accurately with the position of Charkhlik and Mīrān in relation to the present terminal course of the Tārīm after it has received the waters of the Charchan River. The passage further proves that in Li Tao-yüan's time, and probably long before, the position indicated for the territory of Shan-shan was held to have been also that of the Lou-lan kingdom, which figures so prominently in the account of the 'Western Regions' found in the Former Han Annals.

Extract on Lou-lan from Han Annals.

Li Tao-yüan next proceeds to notice an important event in the history of Lou-lan belonging to the year 77 B.C. His record is undoubtedly derived from Chapter xcvi of the Former Han Annals, where, as we shall see, the event is told with additional details. But Li Tao-yüan's abstract states the essential facts so clearly that it will be convenient to reproduce here M. Chavannes' version of it. 'The king of Lou-lan having failed in respect towards the Han, Huo Kuang charged the Superintendent of P'ing-lo, Fu Chieh-tzŭ, to kill him and to nominate a successor in his place. The Han subsequently put on the throne Wei-t'u-ch'i, son of the preceding king, whom they held as a hostage, and changed the name of the kingdom into that of *Shan-shan.* At the time when all the officials came to the *Hêng* gate to wish him a ceremonious farewell, the king on his own account addressed this request to the Son of Heaven: "I have lived long among the Han and fear that the son of the former king may do me harm. In my kingdom there is the town of *I-hsün*, which is a fertile and rich locality. I wish you to send a general to establish there a military colony and to accumulate grain so that I may find support from his prestige and authority." Thereupon colonists were settled there to maintain the peace.'

Chinese post established at *I-hsün.*

Li Tao-yüan's relation of these events has an interest of its own; for it shows that the 'town of I-hsün', where this Chinese military post was established soon after 77 B.C., was not considered

[10] See above, p. 297; Chavannes, *T'oung-pao*, 1905, pp. 566 sq.

[11] M. Chavannes, when discussing the question as to the position of Lou-lan in his note on a passage of the *Wei lio* (*T'oung-pao*, 1905, p. 537, note 2), has endeavoured to utilize the important information furnished by Li Tao-yüan as to the position of the towns *I-hsün* and *Yü-ni*, without, however, arriving at any topographically clear conclusions. He has rightly seen that I-hsün corresponds to Hsüan-tsang's *Na-fu-po* (i.e. Charkhlik), but on the other hand has been led into doubts and difficulties by the assumption that I-hsün was identical also with the 'New Town' which the T'ang Annals mention 200 li west of the 'Stone Town', and which, as we have seen, really is represented by Vāsh-shahri. The fact is that Li Tao-yüan's comments—'un document géographique de la plus haute importance; mais . . . souvent fort obscur', as M. Chavannes rightly puts it—can be utilized to full advantage only by analysing them with closest attention to actual geographical features.

Dr. Herrmann has discussed the question of Lou-lan and Shan-shan at some length, *Seidenstrassen*, pp. 101 sqq., and has done useful work there by disposing of an erroneous theory which would carry Lou-lan far away northward to the vicinity of Hāmi. But he places Yü-ni at Charkhlik, without taking sufficient notice of Li Tao-yüan's topographical indications.

by Li Tao-yüan, or rather the older authority he followed, to have been an earlier capital of Shan-shan or Lou-lan. However, its situation must have lain near the ancient capital of the kingdom; otherwise the establishment of a Chinese military colony there could not have served its avowed object of rendering the position of the new king secure. Thus the presumption is created that the ancient capital also, like I-hsün itself, lay to the south of the terminal course of the Tārīm.

Anecdote about So Man's military colony.

Before proceeding to record the data which enable us more definitely to fix the place of that earlier capital, the commentator makes a long digression to record an anecdote which has no direct bearing on the question immediately before us, but which it will be necessary to consider hereafter. It concerns the foundation of a military colony at Lou-lan by a certain Chinese commander, So Man, who was believed to have secured the necessary irrigation by means of a dam across the Chu-pin River, and to have miraculously protected this dam against the river's flood, after the fashion of the story of Achilles and the river Xanthus. Whatever historical facts underlie this anecdote, their time and place must be looked for elsewhere; for, on the one hand, inferential evidence shows that the alleged founder of this colony belonged to the Later Han period, while, on the other, geographical considerations point clearly to some locality higher up on the Tārīm as the site of the dam which figures in the story. We shall have to return to it when discussing the ruined site north of the Lop desert.[12]

Position of 'town of Yü-ni'.

Resuming his geographical account, Li Tao-yüan proceeds to tell us: 'This river [of Chu-pin] empties itself eastwards into the lake. The lake is to the north of Lou-lan, at the town of *Yü-ni* 扜泥. This [town of Yü-ni] is the one which is usually designated as the "old eastern town" 東古城. It is 1,600 li distant from the Yang barrier 陽關; towards the north-west it is distant 1,785 li from Wu-lei 烏壘; on the east it is 1,865 li from the kingdom of Mo-shan 墨山; towards the north it is distant 1,890 li from Chü-shih 車師 (Turfān).' The distances and bearings here indicated, together with a brief description of the land and its products, are directly taken from the account of the kingdom of Shan-shan or Lou-lan[13] in the Former Han Annals. Hence the discussion of them will best be left until we come to examine that account. Here it suffices to note that they are easily reconciled with the location of Yü-ni to the south of the terminal marshes of the Tārīm.

Li Tao-yüan's 'Old Town' located at Mīrān.

The point of essential importance is that the tradition of Li Tao-yüan's time knew *Yü-ni*, which in the Former Han Annals figures as the capital of Shan-shan or Lou-lan, as 'the Old Town', and placed it to the east of I-hsün, the actual capital of the territory. It must further be kept in view that whereas I-hsün is described as situated to the south of the united course of the Charchan and Tārīm rivers, Yü-ni is placed by Li Tao-yüan to the south of 'the lake' which receives them, and apparently not far from it. If we now compare with these data the geographical facts regarding the areas of early occupation in the Lop tract as well as the archaeological evidence detailed below, we are, I think, necessarily led to the conclusion that I-hsün must be located at the present Charkhlik, while the position of Yü-ni or the 'old eastern town' is marked by the earlier remains of the Mīrān Site. It will be seen further on that these ruins must have been abandoned well before Li Tao-yüan's time, and that their distance from the nearest Lop-nōr marshes northward is even now, in spite of the latter's obvious shrinkage, scarcely more than twelve miles.

Town of I-hsün identified with Charkhlik.

The main argument for these identifications lies in the fact that the relative position assigned to I-hsün and Yü-ni by our texts corresponds exactly to that actually observed in the case of Charkhlik and the Mīrān Site. As regards the identity of the latter with Yü-ni, important confirmatory evidence is supplied by the fact that the excavations described below prove the old

[12] See below, chap. xi, sec. x.

[13] Cf. Wylie, *Notes on the Western Regions*, in *J. Anthrop. Inst.*, x. p. 24.

town site to have been deserted by the fourth or fifth century at the latest, i.e. in the period which elapsed between the redaction of the Former Han Annals and that of Li Tao-yüan's commentary. On the other hand, the location at Charkhlik of I-hsün or the new capital of Shan-shan, as a Chinese commentator of the *Ch'ien Han shu* has rightly called it by inference,[14] is strongly supported by the evidence that Charkhlik has been the chief place of the Lop district from Hsüan-tsang's time onwards. It seems reasonable to suppose that the local conditions were not essentially different in Li Tao-yüan's time, only little more than a century earlier.

Later texts place I-hsün at Mīrān.

[Since the above was written an important paper by M. Pelliot (1916) has discussed two texts of T'ang times which seem to prove that at that period Chinese local belief identified I-hsün with Mīrān.[14a] One is a passage of the itinerary preserved in the *Hsin T'ang shu*, from which we have already quoted the notice concerning 'the garrison of the Stone Town' or Charkhlik. Immediately before this we are told: 'From the southern shore of the P'u-ch'ang sea (Lop-nōr) one passes the town of the seven military colonies which is the town of *I-hsiu* 伊修 of the Han. Then to the west [of this town] after 80 li one arrives at the strong place of the Stone Town (*Shih-ch'êng-chên*), which is same as the kingdom of Lou-lan of the Han and is also called *Shan-shan*. It is 300 li to the south of the sea P'u-ch'ang (Lop-nōr).' M. Pelliot convincingly accounts for the graphic confusion between the forms *I-hsün* and *I-hsiu* and quotes two further passages in which the same locality is mentioned under the latter form of the name. They are found in a geographical text dated A.D. 885 and contained in the MS. Ch. 917 which I recovered from the walled-up temple library of the 'Thousand Buddhas' near Tun-huang. There the 'Town of the military colony' is twice referred to as identical with the town *I-hsiu* and as situated 180 li to the east of the town of Shan-shan, i.e. the town which after A.D. 675 was called the 'strong place of the Stone Town' (*Shih-ch'êng-chên*).

'Town of military colony.'

M. Pelliot has already pointed out that the name 'Town of the military colony' is derived from the Chinese military colony which, as the record in the Former Han Annals discussed below shows, was placed at I-hsün (or I-hsiu) in 77 B.C.[14b] Taking into account the eastern bearing from the 'Stone Town', i.e. Charkhlik, and the distance of 180 li indicated (the 80 li of the T'ang itinerary is clearly only a graphic error), I am led to conclude that the locality intended by the two texts must be the site of Mīrān. It is clear that this location of I-hsün (I-hsiu) cannot be reconciled with the one which is inferred above from Li Tao-yüan's text. If we adopt it, Yü-ni, the old Lou-lan capital, would have to be placed at Charkhlik,[14c] and this is directly contradicted by the bearing which Li Tao-yüan records for it. The fact that his text goes back to the beginning of the sixth century A.D., if not earlier, while the two T'ang texts belong to the ninth century, may explain the discrepancy, but it does not settle the question which of the two locations (Mīrān or Charkhlik) was the right one. The Lop region had passed out of Chinese control for a long period before the T'ang reconquest of the Tārīm Basin, and this may well have brought about a confusion of the historical nomenclature. It must also be remembered that at the time when the texts just quoted were written, in the ninth century A.D., Chinese rule over the Lop region had long yielded to Tibetan invasion.]

Designation of Lop-nōr as 'Lou-lan lake'.

Li Tao-yüan's notice, as far as it concerns us here, concludes with a statement about the lake which receives the waters of the Tārīm. It has its interest for the much-debated question as to the ancient

[14] Cf. Chavannes in *T'oung-pao*, 1905, p. 537, note 2, quoting Hsü Song.

[14a] See Pelliot, *Le 'Cha Tcheou tou tou fou t'ou king' et la colonie sogdienne de la région du Lob Nor*, in *J. Asiat.*, 1916, janvier-février, pp. 116 sq. Cf. also below, M. Chavannes' Appendix *A*, II.

[14b] See below, p. 342.

[14c] Cf. for this view, first suggested by M. Grenard, Herrmann, *Seidenstrassen*, p. 100.

position of Lop-nōr. It incidentally also shows that the older name of Lou-lan or Lao-lan must have long survived in popular use. 'This is why the local people ordinarily call the lake *Lao-lan* 牢蘭海. This is the term used by the *Shih shih hsi yü chi* when it says: "The River of the South, coming from Yü-t'ien (Khotan), proceeds towards the north-east for 3,000 li, and on its arrival at Shan-shan enters into the Lao-lan lake."' This is not the place to enter upon the 'Lop-nōr question' in general, complicated, perhaps, quite as much as elucidated by the controversial literature which has accumulated over it since the days of the protagonists Prejevalsky and Richthofen. But for the historical student the Lao-lan lake in this passage can scarcely refer to anything but the Kara-koshun marshes, which occupied then much the same place which they do now.

Shan-shan during Chin times.

We may now resume our task of tracing back historical notices of the Lop tract previous to Fa-hsien's journey. I can find no mention of it in the passages concerning the Western Regions which M. Chavannes has rendered accessible from the records of the Chin dynasties (A.D. 265–419), though the successful expedition of Lu Kuang in A.D. 383, which on the one side touched Kara-shahr and Kuchā and on the other Chü-mo or Charchan, must have also passed through Shan-shan.[15] But it is of interest to remark that a Chinese notice quoted by Rémusat refers, under the date of A.D. 280, to Shan-shan as the key of the southern route leading from China to Khotan, and to its chiefs as having friendly relations with the Empire.[16] In A.D. 283 the Chin Annals mention the dispatch of young men of princely descent from Shan-shan to take up service at the Imperial Court.[17] We shall see in the next chapter how striking a confirmation these statements have received from the discoveries of Chinese records belonging to the first half of the Chin epoch which Dr. Hedin's and my own excavations brought to light from the ruins of the Chinese military station of 'Lou-lan', in the north of the Lop desert and on the ancient 'middle route' connecting the Tārīm Basin with Tun-huang.[18]

Shan-shan in the *Wei lio.*

For the immediately preceding 'Epoch of the Three Kingdoms' (A.D. 220–265) the extant portion of the *Wei lio*, composed between A.D. 239 and 265,[19] furnishes particularly important notices about the three routes which were then distinguished as leading from Tun-huang to the Western Regions, and to which it will be necessary to refer repeatedly hereafter. The description of the foreign territories along the Southern route opens with 'the kingdom of *Chü-mo* (Charchan), the kingdom of *Hsiao-yüan*, the kingdom of *Ching-chüeh*, the kingdom of *Lou-lan*, which are all dependencies of *Shan-shan*', this list being followed by an enumeration of territories westwards, dependent upon Khotan.[20] There can be no doubt that by Shan-shan is here meant the present Lop tract with its main oasis of Charkhlik. The identity of Chü-mo, Hsiao-yüan, and Ching-chüeh with the ancient oases stretching from Charchan to the end of the Niya River has been fully discussed already.[21] With regard to the 'kingdom of Lou-lan', here mentioned as distinct from Shan-shan, it will be best to reserve our views until we have examined all archaeological data now available for the 'Lou-lan Site' north of Lop-nōr, and until we have ascertained the light which they throw on the few historical notices relating to it.

Niya or Ching-chüeh dependent on Shan shan.

The essential interest of the *Wei lio* record lies in the fact that it mentions the dependence on

[15] Cf. Chavannes in *Ancient Khotan*, i. p. 544; *Voyage de Song Yun*, p. 13, note 2. For the extracts from the *Chin shu* cf *Ancient Khotan*, i. pp. 542 sqq.

[16] Cf. Rémusat, *Remarques sur l'Extension de l'Empire Chinois*, 1825, p. 109, quoted by Ritter, *Asien*, v. p. 324. The original publication is not accessible to me.

[17] Cf. Chavannes, in *Ancient Khotan*, i. p. 537.

[18] See below, pp. 407–8.

[19] Cf. Chavannes, *Les Pays d'occident d'après le Wei lio*, in *T'oung-pao*, 1905, pp. 519 sqq.

[20] Cf. Chavannes, *T'oung-pao*, 1905, pp. 535 sq. The necessity of substituting *Chü-mo* 且末 for the faulty reading 且志 of the *Wei lio* has been conclusively proved by M. Chavannes, *ibid.*, p. 536, note 3.

[21] See above, pp. 219, 296.

Shan-shan of the above-named territories for exactly the same period for which we have documentary proof of such dependence in the case of Ching-chüeh, i.e. the territory of which the Niya Site represents the chief place. In discussing the Kharoṣṭhī documents on wood found at this site, I have already emphasized the importance of the two rectangular double tablets, N. xxiv. viii. 74, 93, which together with the covering-tablet of a third rectangular document, N. xxxvii. i. 2, bear the seal impression in clay of 鄯善郡印 *Shan-shan chün yin*, meaning 'seal of the command of Shan-shan'.[22] One of the complete tablets contains a deed concerning the sale of land, and its attestation by the chief Chinese official of Shan-shan demonstrates the control exercised in civil affairs by the Chinese administration of this territory even as far as the Niya River. The date of the Niya tablets is approximately fixed by the dated Chinese record of A.D. 269, N. xv. 326, brought to light on my former expedition.[23]

Chinese records of Niya Site.

That the native ruler of Shan-shan also shared this extended authority is proved by another epigraphic find which I made at the Niya Site in 1901. It is the rectangular covering tablet N. xv. 345, which appears to have originally been fitted as the lid to a small box, and which bears the inscription: '[Edict of] the king of Shan-shan.'[24] Another Chinese tablet, N. xv. 93, which mentions Shan-shan along with Kara-shahr, Kuchā, and Kāshgar as subject to an unnamed native ruler, seems to belong to the time of Wu-ti (A.D. 265–290), the first Emperor of the Western Chin dynasty. It probably refers, as M. Chavannes has shown, to Lung Hui, king of Kara-shahr, who about the close of that reign established his hegemony over the whole of the Tārīm Basin.[25]

Section III.—SHAN-SHAN IN THE LATER HAN ANNALS.

The notices of Shan-shan become more numerous and historically more interesting as we turn to the Annals of the Later Han dynasty (A.D. 25–220). Chapter CXVIII of these Annals, dealing with the 'Western Regions', is based mainly on the official report furnished about A.D. 125 by the Chinese general Pan Yung, who, together with his even more famous father Pan Ch'ao, was chiefly instrumental in the re-establishment of Chinese political control over the Tārīm Basin, effected after A.D. 73.[1] In this process of reconquest Shan-shan, through its geographical position, was of considerable importance, as we find in the references made to the territory.

Routes leading west of Shan-shan.

The general description of the 'Western territories' subject to the Later Han dynasty and extending as far as the Pāmīrs mentions Shan-shan as situated on the route which led from Tun-huang, through the gate-stations of Yü-mên and Yang, westwards.[2] From Shan-shan onwards two lines of communication are described as leading to the Ts'ung-ling, or Pāmīrs, and across them to the distant countries west. Of the southern one we are told that it passed along the northern foot of the K'un-lun to So-ch'ê or Yārkand. As the territories of Shan-shan, Chü-mo (Charchan), Ching-chüeh (Niya), Chü-mi (Chīra-Keriya tract),[3] and Yü-t'ien (Khotan) are successively mentioned as passed by this route after leaving Yü-mên, its identity in the main with the present-day caravan route from Tun-huang to Khotan via Charkhlik is certain. The northern route is described as leading along the North Mountains, i.e. the T'ien-shan, to Kāshgar. The exact point of its divergence from the southern route is not stated; but a reference to *Chü-shih* or Turfān shows

[22] Cf. above, p. 230.

[23] See *Ancient Khotan*, i. p. 370.

[24] Cf. *Ancient Khotan*, i. pp. 361, 371, 538. The word in brackets represents a character not legible with complete certainty.

[25] Cf. Chavannes in *Ancient Khotan*, i. pp. 537, 543.

[1] Cf. Chavannes' translation of this chapter of the Later Han Annals and his introductory remarks in *Les pays d'occident d'après le Heou Han chou*, *T'oung-pao*, 1907, pp. 149 sqq.

[2] See Chavannes, *ibid.*, pp. 169 sq.

[3] For the identification of *Chü-mi*, also spelt *Yü-mi* or *Han-mi*, see *Ancient Khotan*, p. 467.

that this northern route must have joined the main road which still leads through the string of oases, at the southern foot of the T'ien-shan, to Kāshgar.

Power of Shan-shan kingdom.

The Later Han Annals unfortunately do not furnish any topographical details about Shan-shan. But that this 'kingdom' was then of large extent and possessed considerable resources is proved by a record of the political conditions prevailing in the southern portion of the Tārīm Basin during the years A.D. 58–75.[4] We are there informed that at the time when Kuang-tê, king of Khotan, subdued all the kingdoms from Ching-chüeh (Niya) to Su-lê (Kāshgar), 'the king of Shan-shan also began to become powerful. From this time, on the southern route these two kingdoms [of Khotan and Shan-shan] were alone great throughout the region east of the Ts'ung-ling.' A further reference to the same period is found in the statement of the Annals about Shan-shan having annexed *Hsiao-yüan*, *Ching-chüeh*, *Jung-lu*, and *Chü-mo*, all territories, as we have seen, ranged along the 'southern route' towards the confines of Khotan.[5] This assertion of strength justifies the belief, suggested also by other data noticed below, that the Shan-shan of that epoch, corresponding to the Lop region in its widest sense, comprised a much larger area of settled occupation than can now be found near the terminal course of the Tārīm.

Shan-shan threatened by Hsien, king of Yārkand.

In A.D. 45 we find Shan-shan mentioned among the territories which, threatened by the growing power of Hsien, king of So-ch'ê or Yārkand, endeavoured to secure Chinese protection by sending princes as hostages to the Imperial court.[6] But the help thus solicited proved of no avail; for in the year following An 安, king of Shan-shan, was attacked and defeated by the troops of Hsien, and, after the loss of a thousand men, was forced to take refuge in the mountains. The attack is said to have been provoked by the refusal of the Shan-shan chief, in reply to Hsien's demand, to cut the route which connected his territory with China. In this demand a clear proof may be recognized of the importance attaching to Shan-shan as the key of the most direct route leading into the Tārīm Basin from the confines of the Empire. Since the Empire was then not yet strong enough to resume political aspirations westwards, Shan-shan as well as Turfān was forced to seek support elsewhere by submitting to the Hsiung-nu or Huns in the north.

Pan Ch'ao's operations at Shan-shan.

The importance for Chinese policy which Shan-shan derived from its geographical position is strikingly attested by the record of the events that it witnessed at the very commencement of the operations leading to the re-establishment of Chinese authority throughout the Tārīm Basin in the last quarter of the first century A.D. After sixty years of interrupted relations, as the Annals tell us, the 'Western regions' became again a field for Chinese political activity when the Emperor Ming-ti in A.D. 73 sent troops to the north to exact retribution for the raids of the Hsiung-nu or Huns.[7] Having distinguished himself in the first expedition towards Hāmi and Barkul, Pan Ch'ao, still a subordinate commander but destined to become the reconqueror of the Tārīm Basin, was sent on a political mission to the 'Western countries'. It was at Shan-shan that he laid the foundation of his far-reaching success.[8] Received at first with attention by Kuang, king of Shan-shan, but subsequently thwarted through the secret arrival of a Hun envoy, he promptly established his ascendancy over the king and his territory by a cleverly planned night attack on the Hun camp, which he surprised and, in spite of the smallness of his own escort, completely destroyed. After having thus secured Chinese control over Shan-shan, Pan Ch'ao proceeded westwards, and by a similar bold action assured the allegiance of the king of Khotan, who dominated the Southern route. By A.D. 74 he had extended Imperial authority as far as Kāshgar.[9]

[4] See Chavannes, *T'oung-pao*, 1907, p. 171 sq.

[5] See above, pp. 219 sq., 295 sq.; *Ancient Khotan*, i. p. 167.

[6] Cf. Chavannes, *T'oung-pao*, 1907, pp. 199 sq.

[7] Cf. *ibid.*, pp. 156 sq.

[8] For a detailed and interesting account of this initial exploit in Pan Ch'ao's Central-Asian career, cf. his biography translated by M. Chavannes from the *Hsiao Han shu* in his paper *Trois généraux chinois*, *T'oung-pao*, 1906, pp. 218 sqq.

[9] See Chavannes, *T'oung-pao*, 1906, pp. 221 sqq.

Shan-shan's importance during Pan Ch'ao's campaigns.

There is no need for us here to follow the successive operations by which Pan Ch'ao, in spite of scanty support from the distant Empire, succeeded in gradually consolidating Chinese control over the Tārīm Basin and making his influence felt even in Sogdiana and among the Indo-Scythians on the Oxus. But it is worth notice that it was not until A.D. 94 that Pan Ch'ao, with the help of a large locally raised force, to which along with seven other kingdoms Shan-shan supplied its contingent, succeeded in completing his conquest by the subjugation of the Kara-shahr region.[10] As long as that territory remained beyond direct control, the route leading to the Tārīm Basin through Hāmi and Turfān could not have been safely used by the Chinese for military and commercial purposes.[11] This circumstance must have greatly increased the importance during that period of the route which connected Tun-huang with Shan-shan and thence bifurcated to skirt the oases along the foot of K'un-lun and T'ien-shan respectively.

Pan Ch'ao's reference to desert route to Shan-shan.

There will be occasion later to discuss this route and its bifurcation in detail. Here it must suffice to note how the natural difficulties presented by the desert nature of the first part of the route have found expression in Pan Ch'ao's own words. In a report addressed to the throne in A.D. 78, which the Annals reproduce *in extenso*,[12] he refers to his policy of 'using barbarians to attack barbarians', but at the same time asks for a small Chinese force to furnish a nucleus for the troops of the various kingdoms with which he proposes to subdue Kuchā. In order to prove that the supplies necessary for the maintenance of this Chinese contingent would neither involve expense to the Empire nor cause local difficulties, the general emphasizes the fact that 'at So-ch'ê and Su-lê (Yārkand and Kāshgar) the cultivated soil is fertile and ample; the pastures there are luxuriant and extensive', and significantly adds: 'this region cannot be compared with the one which extends between Tun-huang and Shan-shan.'[13]

Hun troubles after Pan Ch'ao.

In A.D. 105, a few years after the aged Pan Ch'ao had retired, the Western Regions, of which he had been Protector-General, revolted, and as the Imperial Government was unwilling to make fresh efforts in those distant territories, the Huns soon reasserted their former predominance.[14] In order to ward off the resulting attacks of the Huns who were ravaging the Tun-huang border, So Pan, a Chinese general, was in A.D. 119 sent to garrison Hāmi. Thereupon the king of Shan-shan, along with the ruler of Turfān, made his submission. But a few months later So Pan and his small force were destroyed by the Huns, and the king of Shan-shan, seriously threatened, turned to Tun-huang to implore help.[15] The Imperial government contented itself with appointing an assistant 'Protector of the Western Countries', to reside at Tun-huang, and with declaring a nominal supremacy. But in the course of the deliberations at court which preceded this decision, and which are recorded at great length by the Later Han Annals in the biography of Pan Yung, Pan Ch'ao's son,[16] we read for the first time of a protective measure closely concerning the Lop region and its ancient topography.

Pan Yung proposes military colony at Lou-lan.

Besides the appointment of the officer already mentioned to command a small force at Tun-huang, Pan Yung proposed that 'a *Chang-shih* of the Western Countries should be sent, at the head

[10] Cf. Chavannes, *T'oung-pao*, 1906, pp. 234 sqq.

[11] Though the biography of Pan Ch'ao does not mention the specific reason, it appears probable that this prolonged resistance of Yen-ch'i or Kara-shahr and the consequent obstruction of the true Northern route were directly due to the close vicinity of the Huns on the north and to the facility with which they could make their power felt in the Kara-shahr region. A reference to the map shows how easy of access Kara-shahr and the basin of the Baghrash Lake are from the great grazing valleys of Yulduz and the Kunges River in the T'ien-shan. These must have been favourite haunts of the Huns, just as they were later on of the Turks and Mongols. It is this geographical feature which has determined the peculiar rôle of the Kara-shahr tract in the history of Chinese Turkestān; cf. below, chap. XXIX. sec. i.

[12] See *T'oung-pao*, 1906, pp. 224 sqq.

[13] Cf. *ibid.*, p. 226.

[14] See *T'oung-pao*, 1907, p. 160.

[15] Cf. *ibid.*, p. 161, and *T'oung-pao*, 1906, p. 246.

[16] Cf. *ibid.*, 1906, pp. 246 sqq.

of five hundred men, to organize a military colony at Lou-lan. On the West this officer will dominate the roads which lead to Yen-ch'i (Kara-shahr) and Ch'iu-tzŭ (Kuchā). On the South he will fortify the courage of Shan-shan and Yü-t'ien (Khotan). On the North he will overawe the Hsiung-nu (Huns). On the East he will be a neighbour to Tun-huang. It is in this that there lies real advantage.'[17] The same record, in reproducing Pan Yung's answer to a question raised in council, makes him indicate still more clearly the purpose of the proposed military colony at Lou-lan. It was primarily intended to secure the Chinese hold over Shan-shan and the indispensable route leading through it. 'Now the king of Shan-shan, Yu-huan 尤還, is a descendant of Chinese on the female side. If the Hsiung-nu carry out their projects, Yu-huan will certainly die. Now, though these people be like to birds and to wild beasts, they know how to avoid what is harmful. If we move out troops to establish a military colony at Lou-lan, this will suffice to secure us their hearts.'[18]

Position of military colony of Lou-lan.

In the following chapter I hope to show by archaeological proofs that the position of this military colony at Lou-lan, then projected and afterwards actually established, is represented by the ruins of the fortified settlement north of Lop-nōr which Dr. Hedin first discovered, and which I was able fully to survey and explore.[19] There, too, will be the place to examine the reasons which may explain why the earlier designation of *Lou-lan*, originally borne by the whole of Shan-shan or Lop, was retained or revived in Chinese official use for this particular locality.

Advantages of Lou-lan Site.

In any case it is easy to see how completely the position of that ruined settlement answered the strategic objects set forth by Pan Yung for his proposed military colony. Situated on the most direct route from Tun-huang towards the terminal course of the Konche-daryā or Kara-shahr River, it commanded the roads both to Kara-shahr and Kuchā. A Chinese garrison placed there had the chief settlements of Shan-shan, about Mīrān and Charkhlik, sufficiently near on the south to assert a reassuring and controlling influence over them. At the same time it was particularly well situated to ward off any Hun raids which might be directed against the route from the Turfān side on the north and across the western Kuruk-tāgh. Finally, as reference to the map shows, its distance from Tun-huang or Sha-chou was shorter than that of any other place capable of permanent occupation on the routes connecting the Tārīm Basin with that true base for all Chinese enterprise westwards.

Pan Yung aided by Shan-shan.

Pan Yung's recommendation as regards the military colony at Lou-lan was not immediately acted upon. But after Hun inroads had again devastated Kan-su, an offensive move was at last decided upon in A.D. 123, and Pan Yung was appointed 'Chang-shih of the Western Countries'.[20] In the first month of the following year (February, A.D. 124) Pan Yung arrived at Lou-lan and rewarded the king of Shan-shan for his submission by new honours.[21] The kings of Kuchā, Ak-su, and Uch-Turfān came to offer their allegiance. Taking the numerous force brought by them, Pan Yung then moved upon Turfān and, after inflicting a defeat on the Hsiung-nu or Huns, established a military colony at Lukchun, in the Turfān depression.[22]

Operations from Shan-shan towards Turfān.

In the following year Pan Yung, with a large force comprising also troops of Shan-shan, carried his campaign across the T'ien-shan and gained a signal victory over the allies of the Huns in the territory of Posterior Chü-shih, corresponding to the present Guchen (Ku-ch'êng-tzŭ) district. The

[17] See Chavannes, *T'oung-pao*, 1906, p. 248.

[18] See *ibid.*, p. 249.

[19] See below, chap. XI. sec. i–iv, x.

[20] Cf. Chavannes, *T'oung-pao*, 1906, p. 252; 1907, p. 167.

[21] This passage shows clearly that Lou-lan was included in the territory of Shan-shan. The period of the year chosen for the move to Lou-lan has its significance. It is certain that the difficulties presented by the desert route west of the Tun-huang Limes, where some stages probably, just as at present, offered only brackish water, could best be faced in the very depth of winter. [My explorations of 1914 have proved that the ancient Chinese route from Tun-huang to the Lou-lan Site for a distance of close on 120 miles crossed desert ground which must have been wholly waterless throughout historical times.]

[22] See Chavannes, *T'oung-pao*, 1906, p. 252.

placing of a garrison at 'Lou-lan' is not specifically recorded. But the report contained in Pan Yung's biography makes it clear how important a part Shan-shan, to which Lou-lan belonged, had played as the advanced base at the beginning of his successful campaign. It is worth notice that the operations against Turfān and Guchen presuppose the use of the routes which lead from the Lop region due north across the Western Kuruk-tāgh, as Yen-ch'i or Kara-shahr still barred the use of the main road from the Tārīm Basin to Turfān and did not submit to Chinese power until A.D. 127.[23] Owing to advanced desiccation all these routes across the Kuruk-tāgh [as our surveys of 1914–15 have proved] would now offer very serious obstacles to the advance of any large force from the south, and some would be wholly impracticable.

Turkestān at close of Han period.

From the period corresponding to A.D. 132–134 onwards the Later Han Annals record a gradual decay of Imperial prestige in 'the Western kingdoms', which 'oppressed and attacked each other in turn'. The notices we receive of them for the remaining century of the dynasty's reign are distinctly meagre and do not contain any further references to Shan-shan.[24] But in view of the evidence already given for the epoch immediately succeeding, there is no reason to doubt that Chinese control was maintained in one form or another at this outer gate of the Empire's Marches.

Section IV.—EARLIEST RECORDS OF LOU-LAN UNDER THE FORMER HAN.

Former Han Annals' notice of Shan-shan.

It now only remains for us to trace back the history of the Lop region to the oldest of our extant records, mainly furnished by the 'Notes on the Western Regions' of the Former Han Annals (Chapter XCVI).[1] The account which these give of the kingdom of Shan-shan is exceptionally ample, a proof by itself of the importance with which geographical and historical factors had invested that territory during the initial period of Chinese expansion westwards. 'The original name of the kingdom of Shan-shan was Lou-lan 樓蘭. The capital is the city of Yü-ni (Wylie: Woo-ne), which is distant from the Yang barrier 1,600 li and from Ch'ang-an (i.e. Hsi-an-fu) 6,100 li. The kingdom contains 1,570 families, comprising a population of 14,100, with 2,912 trained troops, a Guardian Marquis, a *Ch'io-hu* Marquis, a Protector-General of Shan-shan, a Protector-General for repelling the *Chü-shih*, a Right *Chü-ch'ü*, a Left *Chü-ch'ü*, a Prince for repelling the *Chü-shih*, and two interpreters-in-chief. The seat of government of the Chinese Governor-General lies to the north-west 1,785 li. The kingdom of Shan 山國 is distant 1,365 li; and Chü-shih 車師 lies to the north-west 1,890 li.'

Position of town of Yü-ni.

In these opening passages of the account it is of special interest to note that the capital of the kingdom is placed at the city of *Yü-ni* 扜泥. *Yü-ni*, as we have already shown in discussing the data contained in Li Tao-yüan's commentary on the *Shui ching*, lay not far from the southern shores of the Lop-nōr marshes, and its position is probably marked by the early remains of the Mīrān Site.[2] The reference which the commentator makes to Yü-ni as the place 'ordinarily called the old eastern town' renders this identification certain. With it the various reckonings of distance to other localities fall into easy agreement. The estimate of 1,600 li from the Yang barrier appears very reasonable for the distance of about 310 miles which the map shows between Mīrān and the oasis of Nan-hu, to the south-west of Tun-huang, where the gate-station of *Yang kuan* must probably be located.[3] The reckoning from the Yang barrier suggests that the route meant was the one which

[23] Cf. Chavannes, *T'oung-pao*, 1906, p. 254.

[24] See *T'oung-pao*, 1907, pp. 167 sq.

[1] See Wylie's translation in *J. Anthrop. Inst.*, x. pp. 23 sqq. The need of a new critical translation, with names transcribed according to a recognized system and also reproduced in the Chinese characters, must be badly felt by every non-Sinologist student who wishes to use this important historical and geographical record. In the extracts given below, Mr. Wylie's transcription has been adapted to the Wade system with the kind assistance of Mr. A. D. Waley.

[2] See above, pp. 326 sq.

[3] Cf. below, chap. XVI. sec. iv.

leads from Tun-huang to the Lop tract along the northernmost range of the Āltin-tāgh. It is still used at the present time as an alternative to the desert track, and during the summer months is the only practicable route for caravans. But the result would differ very little if the reckoning were assumed to refer to the desert route, since the distance from Mīrān to the point on the ancient Limes where my explorations have shown the Yü-mên gate-station to have been situated, also amounts by the map to about 295 miles. To Nan-hu or Yang kuan it would be about 30 miles further.[4]

Distance reckoned to Wu-lei.

The distances given to other localities are somewhat more difficult to check, because the routes to which they refer are not determined with equal clearness by the natural configuration of the intervening ground. In the case of the Governor-General's seat at Wu-lei, which may be looked for about the present Chādir on the high road west of Korla,[5] we can scarcely go wrong in assuming that the route mainly followed the line of the terminal Tārīm and of the Konche-daryā, by which all traffic still proceeds from the Lop tract to Korla. The bearing to the north-west is certainly correct, and the distance of about 320 miles, as shown by Dr. Hassenstein's map, does not seriously differ from the 1,785 li of the text, seventeen daily marches being the present road reckoning.

Routes to Singer and Turfān.

The 'kingdom of Shan' 山 can only be roughly located in the Western Kuruk-tāgh. If its identification with Singer, the only place of actual cultivation and that of the smallest size, is accepted,[6] we can account for the estimated distance of 1,350 li by assuming that the route, as at present, led up the Tārīm to the vicinity of Turfān-karaul and thence past the ruined station of Ying-p'an north-eastwards.[7] The most direct route from Lop to Turfān, as still used in recent times, lies through Singer, and as the latter place is shown by our Map No. 55 to be separated from the old Turfān capital by about 110 miles, it is possible to assume that the distance of 1,890 li given between Shan-shan and Chü-shih was reckoned along this line of route. But it must be remembered that in ancient times, when desiccation had not progressed as far as now, other routes through the Kuruk-tāgh may also have been practicable, and in any case the erroneous bearing indicated, which makes Chü-shih lie to the north-west of Shan-shan, must serve as a warning that we are here on less secure ground.

[4] Dr. Herrmann, *Seidenstrassen*, p. 106, assumes that the distance from the Yang barrier to Yü-ni was calculated by a route which led first to the 'Lou-lan' Site north of Lop-nōr and then turned to the south-west to Charkhlik, where he assumes Yü-ni to have been situated. Reference to the map shows that such a route would have implied a very considerable détour, not warranted by physical conditions, which, as far as transit between the Charkhlik tract and Tun-huang is concerned, must always have favoured the use of the shorter lines either straight through the desert or along the Āltin-tāgh. It deserves to be noted that Fa-hsien, who certainly could not have travelled by the then abandoned route passing the Lou-lan settlement, took seventeen days to travel from Tun-huang to Shan-shan (see above, p. 324). This is exactly the number of the rather long daily marches which brought me from Abdal to Tun-huang by the direct desert route.

[5] Cf. above, p. 296; Herrmann, *Seidenstrassen*, p. 38, note 4; Wylie in *J. Anthrop. Inst.*, 1881, p. 23.

[6] Cf. Chavannes in *T'oung-pao*, 1905, p. 552, note 7, where other references to this petty territory of Shan (called Mo-shan 墨山 by the commentator of the *Shui ching*, *ibid.*, p. 570) are discussed. Its identification with 'Kizil-sangir' (i. e. Singer) was first suggested by Grenard, *Mission D. de Rhins*, ii. p. 61. [My surveys of 1915 showed traces of former cultivation on patches of ground at Po-ch'êng-tzŭ and Shindi to the north-west and south-west respectively of Singer. This name is now in use for the tiny colony that alone remains.]

[7] This well-known route from Tikkenlik on the Tārīm to Singer via Ying-p'an was duly surveyed by Col. Kozloff in 1893 and is shown in the map illustrating Roborovsky's expedition of 1893–95. Dr. Herrmann also accepts the location of *Shan* at 'Kizil-sangir' and the use of the Ying-p'an route (*Seidenstrassen*, p. 112), but believes, in accordance with his system of interpreting the reckonings of *Ch'ien Hanshu's* road, that the distance of 1,350 li was obtained by first going north-east from Yü-ni to the 'Lou-lan' site, then due west to Ying-p'an, and thence to Singer. The map shows the huge détours such a route would have implied. From Col. Kozloff's surveys it is seen that Singer can even now be reached from the 'Lou-lan' Site by comparatively short routes provided with springs of some sort. [Our surveys of 1914–15 have fully confirmed this.]

People and products of Shan-shan.

The relatively large population which the Annals assign to Shan-shan or Lou-lan—1,570 families, nearly one-half of those in Yü-t'ien or Khotan (3,300), and close on seven times as many as those in Chü-mo or Charchan (230)—deserves all the more attention in view of what we are told of the nature of the soil and the resources of the territory. 'The land is sandy and salt, and there are few cultivated fields. The country relies on the neighbouring kingdoms for cereals and agricultural products. It produces jade, abundance of rushes, the tamarix, the *Elaeococca vernicifera*, and white grass. The people remove with their flocks and herds for pasturage where they can find sufficiency of water and herbage. They have asses, horses, and many camels. They can fabricate military weapons the same as the people of Jo Ch'iang 婼羌.'

Description of physical features.

In this description we find the chief characteristic features of the Lop region reproduced with considerable accuracy: the great extent of drift-sand areas, the wide belts of salt-impregnated soil along the terminal river-beds and lagoons where vegetation is mainly restricted to reeds and tamarisk scrub, and the narrow limits of the ground where irrigation is possible. We see clearly that, then as now, agricultural possibilities must have been greatly restricted by the difficulties in utilizing for irrigation the ever-shifting channels in which the abundant, but rather saline, waters of the Tārīm and its last affluents lose themselves over this deltaic ground of drift-sand and marsh-land.[8] In view of this explicit statement we are the more justified in assuming that the main sites of permanent occupation during ancient times must be looked for in the same few localities where present conditions still permit of agricultural settlements, though within limits probably much reduced through the progress of desiccation.

Population of ancient Lop region.

The account of the Annals throws into prominence the essential fact that a considerable proportion of the population must then, as at the present day, have been wholly dependent on pastoral pursuits, whether in the riverine belts or in the mountains to the south. It is this existence of opportunities for the life of the herdsman and fisherman which probably attracted here, in the course of the eighteenth century, the modern Loplik population, consisting, according to a reliable account, of Kirghiz and Kalmak immigrants, and undoubtedly of true nomad stock.[9] At the same time, the considerable population given for ground possessed of such scanty resources may safely be recognized as a sign that the territory included in Shan-shan was extensive. It seems well to lay stress on this point; otherwise a doubt might be felt as to whether the 'Lou-lan Site' could have been comprised in the Shan-shan 'kingdom', while its capital lay as far south as Mīrān.

Position of chief Lop settlements.

From our examination of the records by which we can trace back the history of the Lop tract from modern and mediaeval times to the early centuries of our era, it has, I think, become clear that during the whole of this long period the chief permanent settlements of the territory were situated to the south of the line represented by the present terminal marshes of the Tārīm and Charchan River, and that they owed their existence to the streams which alone could assure cultivation at the foot of the great mountain glacis. It remains for us to ascertain whether the conditions were also the same during the earliest epoch so far accessible, that to which the data furnished by the records of the Former Han dynasty relate. Special care is needed in examining this question, because protracted discussions as to great changes which have been assumed in the bed of Lop-nōr, and also certain inferences first suggested by Dr. Hedin's discovery of the Lou-lan Site ruins, have tended

[8] As regards the difficulties which have dogged the recent efforts of the Chinese administration to establish agricultural settlements at Tikkenlik, Doral, and other points on the Tārīm, near what may be considered the northern extremity of the present inhabited Lop tract, cf. the instructive account of Huntington, *Pulse of Asia*, pp. 265 sqq.

[9] See the interesting and still very useful data recorded in Forsyth, *Yarkand Mission Report*, pp. 51 sq. The resemblance between the Loplik dialect and the Turkī spoken by the Kirghiz in the mountains to the north-west struck several of my Yārkand and Kāshgar followers.

rather to obscure the issue. Fortunately the information given, for this period, by the Former Han Annals about Shan-shan or Lou-lan is comparatively abundant. We owe this to the exceptional importance then possessed by the territory as the key to the route which first served China's political and commercial advance into the Tārīm Basin and westwards.

First Chinese expansion westwards.

The account which the notice on Shan-shan or Lou-lan gives of the early events of this expansion has been treated so often that it will suffice if we consider here the points which have a direct bearing on the historical geography of the Lop-nōr region. After Chang Ch'ien's return from his famous mission, the Emperor Wu-ti commenced systematic operations against the Hsiung-nu or Huns, which led to the occupation of westernmost Kan-su (*circ.* 121 B.C.) and the subsequent extension of the 'Great Wall' to beyond Tun-huang.[10] Chinese intercourse with Ta-yüan (Farghāna) and the interjacent countries then became so frequent that 'the envoys of the respective nations followed each other continuously, more than ten in number in the course of a year'. 'Lou-lan,' thus the record of the Annals continues, 'in concert with Ku-shih, however, being on the high road, harassed these officials, attacked and robbed the Chinese envoy Wang K'uei and his party, and on various occasions acted as eyes and ears to the Hsiung-nu, causing their troops to intercept the Chinese envoys.'[11] This interference with his missions westwards induced the Emperor Wu-ti to dispatch the general Chao P'o-nu on a punitive expedition against the offending states. Advancing at the head of seven hundred light horse, Chao P'o-nu, in 108 B.C., 'seized the king of Lou-lan; then subjugated Ku-shih, and, relying on the prestige of his fierce troops, he overawed the States dependent on Wu-sun and Ta-yüan'.

Expedition against Lou-lan, 108 B.C.

Position of *Ku-shih* (Turfān).

The reference made to Lou-lan in connexion with this expedition, brief as it is, has its value for the geographical question at issue. It is shown that the kingdom of Lou-lan lay on the 'high road' leading from Tun-huang to Ta-yüan or Farghāna, and that consequently its attitude was of essential importance for the safety of the Chinese political and commercial missions proceeding towards 'Ta-yüan and the interjacent countries'. In order to determine more exactly the direction of that high road and the position of Lou-lan, it is necessary to make sure of the identity of the territory *Ku-shih*, the people of which had abetted Lou-lan in its attack on the Chinese envoy and also helped the Huns to intercept other Chinese missions. Now, all Sinologists dealing with this notice of the Former Han Annals have assumed that by *Ku-shih* 姑師 is meant the territory elsewhere called *Chü-shih* 車師, i.e. Turfān,[12] and in view of the explicit statement of a preceding passage, according to which Ku-shih was, after a successful Chinese expedition in the period 73–49 B.C., divided 'between the two kings of Anterior and Ulterior *Chü-shih*', this identification may be considered certain.[13]

[10] Cf. Wylie in *J. Anthrop. Inst.*, x. p. 22.

[11] See Wylie, *J. Anthrop. Inst.*, x. p. 25; also p. 71; for the corresponding notice of these events in Book CXXIII of Ssŭ-ma Ch'ien's history, from which the Annals' account seems derived, cf. Kingsmill in *J.R.A.S.*, 1882, p. 17. Brosset's translation of that chapter (*J. As.*, 1828, pp. 418–450) is not accessible to me. M. Chavannes' monumental translation of that great historical work has unfortunately not progressed to Book CXXIII.

[12] Cf. Wylie, *J. Anthrop. Inst.*, x. p. 25, note; Kingsmill, *J.R.A.S.*, 1882, p. 6; Chavannes, *T'oung-pao*, 1905, p. 533, note; *Turcs occid.*, p. 101.

[13] Cf. Wylie, *J. Anthrop. Inst.*, x. p. 22. It is noteworthy also that the account in the Former Han Annals of Chü-shih or Turfān, when mentioning two Chinese expeditions against this territory in the years 99 and 89 B.C. respectively, distinctly refers to troops from Lou-lan having been employed, apparently as the chief contingent; cf. Wylie, *J. Anthrop. Inst.*, xi. p. 106. This well illustrates the course followed on Chao P'o-nu's expedition, which first secured Lou-lan before attacking Ku-shih, i. e. Turfān.

I have thought it necessary to indicate clearly the evidence for the identity of *Ku-shih* and *Chü-shih*, in view of Dr. Herrmann's remarks, *Seidenstrassen*, pp. 102 sq. He rejects the identification without either adducing any definite evidence against it or suggesting any other location for Ku-shih. On the other hand, Dr. Herrmann's very careful investigation of the questions connected with the position of Lou-lan and Shan-shan has the merit of having demonstrated that the view held by certain Chinese scholars, and formerly adopted

With this point accepted, a careful comparison of the evidence furnished by the above record with what we know of the actual topography of this region leads to several highly probable inferences. In the first place, it is clear that Lou-lan, if it was necessary to subjugate it before Ku-shih or Turfān, must be located around Lop-nōr, for only here could physical conditions during historical times have permitted of the existence of settlements which might form a 'kingdom' and serve as a base for an advance upon Turfān. The latter was accessible for a Chinese force operating from the Tun-huang Marches only by the route leading past Lop-nōr. For of another, crossing the desert range of the Pei-shan much further to the east, we know, from a definite statement of the Former Han Annals, that it was not opened until the period A.D. 1–5.[14] Hence it follows that the Chinese expedition proceeded via Lop-nōr, and that the Lou-lan of that period must correspond roughly to the Lop tract, as we have also shown of Shan-shan.

Lou-lan as base against Turfān.

In the second place, since the 'high road' referred to in connexion with the events preceding the Chinese expedition of 108 B.C. was liable to obstruction both from the side of Lou-lan and of Ku-shih (Turfān), the route meant must have lain to the north of Lop-nōr. The only line here available for the early Chinese missions was the route which once connected the site of 'Lou-lan', on the east, with the end of the Great Wall and, on the west, with the northern string of oases in the Tārīm Basin.[14a] Reference to the map shows that this line of communication must have been exposed to Hun raids both from the side of Kara-shahr and from that of Turfān due north, and it is exactly this condition of things which the record concerning the expedition of 108 B.C. indicates.

Route obstructed from Lou-lan and Turfān.

Kara-shahr offered easy access from the great grazing tracts north of the T'ien-shan and in the Yulduz Valley which were held by the Huns, and must always have been a particularly convenient

Hun raids from Kara-shahr.

also by M. Chavannes, which would place Shan-shan at the modern Pichan, east of Turfān, or else at a locality, called *Na-chih* 納職, corresponding to the present Lapchuk north-west of Hāmi, is quite untenable. The geographical arguments against such a notion are so strong and have been so clearly stated by Dr. Herrmann that it does not seem necessary to discuss in detail the Chinese statements, mostly modern, upon which this conjectural location was based, and which M. Chavannes' note on the *Wei lio*, *T'oung-pao*, 1905, pp. 531 sq., reproduces.

With reference to *Na-chih*, however, there is a point of interest, which deserves to be noted here, because it connects the place with Lop and explains how the erroneous identification probably arose. The *T'ang shu*, indeed, says that Na-chih was established in A.D. 630 at the site of the ancient town of Shan-shan. But in view of what the same Annals state elsewhere about the position of Lou-lan or Shan-shan being marked by Shih-ch'êng, the 'Stone Town', to the south of Lop-nōr (cf. above, p. 320), it is obvious that, as Dr. Herrmann has rightly recognized, the record given by an earlier text, the *Yüan ho chün hsien t'u chih*, is more deserving of attention. According to this text, which was published between A.D. 806 and 814 (see Chavannes, *loc. cit.*), 'the sub-prefecture of Na-chih was 120 li to the south-west of I-chu (Hāmi). This town was built by people from Shan-shan. Since the barbarians give to Shan-shan the name of *Na-chih*, this same name was applied also to the sub-prefecture.'

The true explanation of this passage has been found by M. Pelliot. In 1910 he was kind enough to point out to me that, as the locality meant by Na-chih is undoubtedly the present oasis of Lapchuk, some thirty-three miles to the west-north-west of Hāmi (see Map No. 69; for its old remains, cf. below, chap. XXVIII. sec. iii), the statement recorded by Li Chi-fu, the author of the *Yüan ho chün hsien t'u chih*, obviously refers to a connexion between the name *Na-chih* and the old indigenous designation of the Lop region which we find reproduced already in Hsüan-tsang's *Na-fu-po*. We have fresh evidence here for the antiquity of the name *Lop*, which we have previously traced in Hsüan-tsang's *Na-fu-po* and in the *Nob* of the Tibetan records from Mīrān, and confirmation also for the correspondence between the Chinese transcription *na* and the initial *l* of the indigenous form of the name, as indicated in our discussion of the name (see above, pp. 321 sq.). [M. Pelliot has now fully explained this view and supported it by an interesting notice of Na-chih drawn from our Ch'ien-fo-tung MS. Ch. 917, in *J. As.*, 1916, pp. 117 sqq., note.]

[14] Cf. Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.*, xi. p. 109; also Chavannes, *T'oung-pao*, 1905, p. 533, note 1. The exact line of this 'new road' will have to be determined elsewhere; cf. below, chap. XIX. sec. vi. In the Later Han Annals we find the still later route from Tun-huang via I-wu (Hāmi) to Kao-ch'ang or Turfān, which was opened after A.D. 73, quite correctly described as a main road to the 'Western Countries' alternative to the route via Shan-shan; see Chavannes, *Heou Han chou*, *T'oung-pao*, 1907, p. 169.

[14a] See below, chap. XIV. sec. ii.

gate for Hun inroads into the Tārīm Basin.[15] Hun parties sent thence to intercept Chinese missions could best effect their object on that part of the road which led westwards through Lou-lan, assuming that by this term is meant, as by the mediaeval and modern *Lop*, the territory comprising the whole of the Tārīm delta around Lop-nōr. We have probably a definite instance of such a move in the record of the attempt which the Huns made in 104 B.C. to cut off the return of a Chinese expedition to Ta-yüan by a force of cavalry posted in Lou-lan.[15a]

Hun raids across Western Kuruk-tāgh.

But this route must have been equally exposed to Hun raids from the side of Turfān. If reference is made to the map illustrating the explorations effected by Colonel Kozloff between Turfān and Lop-nōr in the course of his and Captain Roborovsky's expedition in 1893–5, or to our own Surveys of 1914–15, it is seen that there are at least three still practicable tracks which cross the wastes of the Kuruk-tāgh due south of Turfān. All meet at right angles the ancient route which here approached the southern foot of the range. It is true that probably several of the scanty springs upon which the use of these tracks depends are now salt, like those of Āltmish-bulak to the north-east of the Lou-lan site,[16] and consequently can only be utilized when their water becomes drinkable through freezing. But these difficulties about water must have been less serious in ancient times, before desiccation had progressed as far as it has now, and it appears to me probable on several grounds that this central portion of the Kuruk-tāgh could then be crossed by small parties.[17] In this way the ancient route leading from Tun-huang to the north of Lop-nōr is likely to have been exposed to flanking attacks by Hun raiders here also.

Ssŭ-ma Ch'ien's reference to Lou-lan.

In this connexion convenient reference may be made to a passage of Chang Ch'ien's report, as contained in Chapter CXXIII of Ssŭ-ma Ch'ien's history, which also connects Ku-shih, i. e. Turfān, with Lop-nōr. In a summary geographical description of the Tārīm Basin we are told that 'adjoining the salt marsh (i.e. Lop-nōr) were the states of Lou-lan 樓蘭 and Ku-shih 姑師, the plains outside the cities of which reached to the water of the lake' (Kingsmill).[18] M. Chavannes translates 'les royaumes de *Leou-lan* et *Kou-che* ont des villes munies de remparts intérieurs et extérieurs et sont voisins du marais salé', thus stating that both territories extended to the vicinity of the lake. But in his explanatory remarks he specially emphasizes the fact that the wording of the Chinese text does not imply that the capitals of the two kingdoms were necessarily situated close to the lake.[19]

Lou-lan and the 'Salt Marsh'.

In view of obvious geographical facts and of what has been stated above as to the identity of Ku-shih with Chü-shih or Turfān, we must, as far as the latter territory is concerned, accept M. Chavannes' explanation that by the vicinity of Lop-nōr the text merely means easy access to it by routes. And that this actually existed I have, I hope, made quite clear by my discussion of the topography. As regards Lou-lan a much closer vicinity to the 'salt marsh' must be assumed; but the passage of Chang Ch'ien's report does not help us to define the extent of the territory and the position of its chief place more exactly.

[15] It is significant that according to a notice in the Former Han Annals (cf. Wylie, *J. Anthrop. Inst.*, x. p. 21) the 'Slaves' Protector-General' appointed by a Hun prince, before Chinese supremacy had asserted itself, 'to rule the Western regions . . . always dwelt in the dangerous part of Yen-ch'i (Kara-shahr). He had to levy the taxes on the cultivated land, and received of the wealth of these kingdoms.'

[15a] See below, p. 339.

[16] Cf. for the 'Sixty' springs of Āltmish-bulak, Hedin, *Central Asia*, i. p. 366; ii. pp. 97 sq., 108.

[17] For a similar inference as regards a portion of the eastern Kuruk-tāgh, see below, chap. XIX. sec. vi.

[18] Cf. *Intercourse of China with Eastern Turkestan*, *J.R.A.S.*, 1882, p. 6.

[19] See Chavannes, *T'oung-pao*, 1905, p. 533, note. That M. Chavannes claimed the benefit of this interpretation also for the erroneous location of Lou-lan at Pichan or Lapchuk (cf. above, p. 336, note 13) does not invalidate the intrinsic correctness of his explanation.

Section V.—LOU-LAN RE-ESTABLISHED AS *SHAN-SHAN*

Lou-lan between Huns and Chinese.

We may now resume the synopsis of the events concerning Shan-shan or Lou-lan as recorded by the Annals. Chao P'o-nu's successful expedition (A.D. 108) had resulted in the submission of Lou-lan, which 'presented offerings of tribute to China'. But when the Hsiung-nu, on hearing of this, moved troops to attack Lou-lan, its king characteristically enough is said to have 'sent one son as a hostage to the Hsiung-nu, and another to China'.[1] It is easy to understand this uncertain attitude of the small state upon which the Chinese advance westwards had suddenly imposed strategic importance; for it was only in the time immediately following Chao P'o-nu's expedition that, according to the statement in the Annals, the fortified border line known as the 'Great Wall' was extended from Chiu-ch'üan or Su-chou to the *Yü-mên* or 'Jade Gate'.[2] Of this my explorations have proved that it was established after the end of the second century B.C. on the westernmost part of the Limes beyond Tun-huang, and by the very route which still leads from Tun-huang to the region of Lop.[3]

First expedition against Ta-yüan.

A few years later Lou-lan again figured prominently in the events connected with the expeditions which the Emperor Wu-ti dispatched against distant Ta-yüan or Farghāna.[4] 'Afterwards,' the Han Annals tell us, 'when the Êrh-shih General went to attack Ta-yüan, the Hsiung-nu wished to intercept him. The General's troops, however, presented such a formidable appearance that they did not dare to take the initiative, but sent cavalry to wait in Lou-lan till the Chinese envoy should again pass, wishing completely to cut off his return.' The expedition here referred to was in all probability the first which was led westwards, in 104 B.C., by Li Kuang-li, the 'Êrh-shih General', but which was forced to retire to Tun-huang two years later without having attained its goal and after heavy losses.[5]

Chinese ascendancy over Lou-lan.

The sequel is thus told in the Annals: 'The Chinese military chief, Jên Wên 任 文, had then command of the military colony at the Jade Gate barrier (*Yü-mên kuan*); and when the Êrh-shih General was afterwards obstructed, Jên Wên ascertained the facts from some captives and reported the same to the capital. The Emperor issued a rescript ordering Jên Wên to lead troops by a convenient road and capture the king of Lou-lan. The General proceeded to the city gate, where he reproached the king for his conduct, but the latter replied: "When a small State lies between two great kingdoms, if it has not an alliance with both, it cannot be at rest. I wish now to place my nation within the bounds of the Chinese empire." The Emperor, confiding in his words, re-established him in his kingdom, and commissioned him to keep a watch over the movements of the Hsiung-nu. From this time the Hsiung-nu had no great intimacy with, or confidence in, Lou-lan.'[5a]

Chinese retreat through Lou-lan.

The course of events here recorded is in full agreement with the assumption that the position and extent of Lou-lan roughly coincided with that of the territory known later as Shan-shan or Lop. For a Chinese force returning from the direction of Farghāna to Tun-huang, the route leading to the north of Lop-nōr and along the foot of the Kuruk-tāgh was obviously the nearest line of retreat.

[1] Cf. Wylie, *J. Anthrop. Inst.*, x. p. 25. Here and in other extracts I am substituting for Mr. Wylie's transcripts of Chinese names those conforming with the Wade system.

[2] Cf. Wylie, *ibid.*, pp. 25, 71 ('Guard-houses were planted at intervals, from Chiao-ch'üan to the Yü Gate'); also Kingsmill, *J.R.A.S.*, 1882, p. 18.

[3] See below, chap. xix–xx.

[4] Cf. for a detailed account of these operations, which best show the rapid extension of Chinese power into the Tārīm Basin and even beyond, Ssŭ-ma Ch'ien's narrative in Kingsmill, *Intercourse of China with Eastern Turkestan*, *J.R.A.S.*, 1882, pp. 22 sqq.

[5] See Kingsmill, *J.R.A.S.*, 1882, p. 23.

[5a] Cf. Wylie, *ibid.*, p. 26.

It was here, within ground belonging to Lou-lan or Lop, that the Huns would have their best chance of completely cutting off the force, or of at least seriously hampering its retreat. We know that the 'Êrh-shih General' made his way back to the Chinese border line, though with only 'one or two tenths of those who had set out'.[6] But we are not told what exactly was the chronological relation between his retreat and Jên Wên's punitive expedition against the king of Lou-lan.

Route to Lou-lan south of Lop-nōr.

The general tenor of the record, however, goes to show that the movement of Chinese troops to the seat of the king of Lou-lan took place somewhat later and was not a succouring expedition. If this interpretation of the facts so briefly recorded is right, some importance may, perhaps, be attached to the mention made of 'a convenient road' by which the troops were to be led to the capture of the Lou-lan king. Taking into account ascertained geographical and archaeological facts, and what has been shown above as to the position of the 'capital' of the Lop tract from Later Han times onwards, I cannot help surmising that this reference to a 'convenient road' implies the use of a route different from that north of Lop-nōr which, as we have seen, previous Chinese missions and expeditions are likely to have followed. If we assume that the chief's residence lay then, as it certainly did during the subsequent periods, to the south of the Lop-nōr marshes in the Mīrān-Charkhlik tract, this special mention of the route leading to it becomes fully intelligible; for the nearest and most convenient route to a Lou-lan capital thus situated led clearly by the present Tun-huang–Charkhlik caravan track, and not by the line connecting the Tun-huang Limes with the once inhabited tract north of Lop-nōr marked by the ruined 'Lou-lan Site'.

Chinese control over Lou-lan, 100 B.C.

That by Jên Wên's expedition the Chinese had for the time being secured complete control over Lou-lan is proved by the unobstructed passage through it of the second and entirely successful expedition which the 'Êrh-shih General' led against Ta-yüan or Farghāna about 101–100 B.C.[7] Nor could it have been very difficult to assure this control over the Lop region, considering that under the 'Êrh-shih General' 'there marched out of Tun-huang a force of sixty thousand men, not including camp followers,' according to Ssŭ-ma Ch'ien's contemporary testimony. To the really serious difficulties which must have attended the movement of such numbers across desert ground I shall have occasion to refer later on. After the striking success which attended this great Chinese undertaking in a distant part of Central Asia, we are told that 'westwards, as far as the "Salt water", i.e. Lop-nōr, rest-houses were established'.[8] This measure was doubtless a result of the transport experiences gained between Tun-huang and Lou-lan. In 99 B.C., as we read in the Annals, Lou-lan furnished the troops for a Chinese attack upon Chü-shih or Turfān.[9] Also in 89 B.C. a Lou-lan contingent figured in the force which was sent against Turfān in order to create a diversion, and thus to aid a Chinese force operating against the Huns north of the T'ien-shan. It was then that the king of Chü-shih submitted to the Empire.[10]

Hun influence reasserted at Lou-lan.

Meanwhile the king of Lou-lan had died in 92 B.C. The Chinese court, not finding it opportune to let the hostage prince who had been kept in confinement depart from China to his home, caused the next son to be installed. When he, too, died, 'the Hsiung-nu, first hearing of it, sent their hostage prince back, who succeeded to the throne.' This new king, when summoned by an Imperial rescript to proceed to the Chinese court, naturally delayed his appearance there, warned by the fact that two members of the royal family sent to China as hostages had never returned.[11] The Annals then continue: 'Now the extreme eastern border of the kingdom of Lou-lan where it approaches nearest to China, was opposite to the *Po-lung-tui* ("White Dragon Mounds"), where there was a scarcity of water and pasture; and it always fell to its share to provide guides, to carry water and

[6] Cf. Kingsmill, *J.R.A.S.*, 1882, p. 23.
[7] Cf. *ibid.*, pp. 25 sqq.
[8] Cf. *ibid.*, pp. 24–9.
[9] Cf. Wylie, *J. Anthrop. Inst.*, xi. p. 106.
[10] See *ibid.*, xi. pp. 106 sq.
[11] Cf. *ibid.*, x. pp. 26 sq.

to forward provisions to meet the Chinese envoys; but being frequently exposed to the oppressive raids of the soldiery, they at last resolved that it was inconvenient to hold intercourse with China. Afterwards, again on the revolt of the Hsiung-nu, they several times intercepted and killed the Chinese envoys.'

This passage is of special interest for the ancient geography of the Lop region; for it clearly indicates the extent eastwards of the territory then known to the Chinese as Lou-lan, and also throws light on the serious physical difficulties with which the use of the route leading through it from Tun-huang had already to contend, whether for military or commercial purposes.

Location of 'White Dragon Mounds'.

[The topographical details of the line which the direct route through the desert from Tun-huang to the Lou-lan territory had followed, during Han times and for some time later, were first cleared up by the explorations I effected in the winter of 1914. The main results have been briefly given in the preliminary report on my third Central-Asian expedition, published in the Royal Geographical Society's *Journal*.[12] A full account of these explorations and of the archaeological evidence which enabled me definitely to trace the ancient Chinese route to Lou-lan can, however, be made available only when the time comes for preparing the detailed Report on my journey of 1913–16. In the meantime I must content myself here with a reference to the above preliminary account and a statement concerning the special topographical point to which the Han Annals, as above quoted, refer.

I believe that the designation of *Po-lung-tui*, 'the White Dragon Mounds', was applied by the Chinese, from the time of the first opening of the route, to that particular portion where it skirts and then crosses the extreme north-eastern extension of the dried-up salt bed of the ancient Lop-nōr. There strings of salt-coated clay terraces, all undoubtedly carved out by wind-erosion from what was the lake bottom of an earlier geological period, run parallel to each other in the direction from east-north-east to west-south-west, and extend for a considerable distance along both the western and eastern shores of the ancient salt-encrusted lake bed.[13] Their fantastic and yet curiously uniform shapes would readily suggest to Chinese eyes the form of 'a dragon in earth which was without a head but had a tail. The highest rise to two or three *chang* (twenty or thirty feet); the lowest to over one *chang* (over ten feet). All of them are turned towards the north-east and resemble each other.' Thus a Chinese commentator of the Former Han Annals, writing in the third century A.D., accurately and graphically describes them.[14]

These belts of salt-impregnated 'Mesas' form the most striking feature of the dismal ground crossed by the last two marches but one of the ancient route before it reached the extreme eastern limit of the Lou-lan area which once possessed water and vegetation. This explains why the *Wei lio*, where it describes 'the route of the Centre' which led direct from Tun-huang towards Kuchā, places the *Lung-tui* or 'Mounds in the shape of Dragons' immediately before the station of 'the ancient Lou-lan'.[15] My explorations of 1914 have proved that on the line followed by the old Han route, the *Wei lio's* 'route of the Centre',[16] there was, for a distance of over 120 miles, a stretch of ground to be crossed which in Han times was already a waterless desert of salt, bare clay, or gravel. This forbidding waste lay between the line of wells still available in the long-extended depression which connects the terminal Su-lo Ho drainage with the easternmost end of the ancient salt lake-bed of Lop-nōr[17] and the furthest point reached by the Kuruk-daryā, the river branch

[12] See *Geogr. Journal*, 1916, xlviii. pp. 126 sqq.

[13] Cf. *ibid.*, p. 128.

[14] Cf. Chavannes, *T'oung-pao*, 1905, pp. 529 sq., note 7.

[15] Cf. *ibid.*, p. 529.

[16] For the reason of this designation, cf. below, chap. XIV. sec. ii; also *Desert Cathay*, i. p. 515.

[17] As regards this well-marked depression or valley connecting the terminal bed of the Su-lo Ho and the north-eastern extremity of the salt-encrusted Lop-nōr basin, cf. *Desert Cathay*, i. p. 535; also below, chap. XIV. sec. i.

which is now quite dry, but then stretched its delta to the northern settlements of Lou-lan, including the ruined station of 'Lou-lan'.

It was for crossing this absolutely barren desert without water or vegetation that the Chinese missions required provision to be made, from the nearest part of inhabited Lou-lan, for guides and for the carriage of water and supplies to meet them near the 'White Dragon Mounds'. Even with the help thus provided, it remains somewhat of a problem how those ancient Chinese organizers of transport succeeded in maintaining traffic, including the movement of large bodies of men, over so great a stretch of ground devoid of all resources and presenting formidable natural obstacles. In any case, the passage from the Annals plainly shows to what tribulations the use of the ancient route north of the dried-up Lop sea-bed by large Chinese convoys, &c., must have exposed the Lop population, semi-nomadic as it was.]

Chinese attack on Lou-lan king, 77 B.C.

We may now turn to the concluding portion of the notice on Shan-shan in the Former Han Annals. It deserves special attention, for it explains how this name for the Lop territory came to supplant the earlier designation of *Lou-lan*. The trouble, already referred to, which the territory had given caused the Chinese in 77 B.C., apparently at the instigation of Wei-tʻu-chʻi, a younger brother of the king, who had submitted to them and was living in China, to dispatch a high officer, Fu Chieh-tzŭ, with instructions to put to death the Lou-lan king.[18] After selecting a few daring followers and circulating the report that he was going on a friendly diplomatic mission, Fu Chieh-tzŭ proceeded to Lou-lan. There 'he deceived the King with the pretence that he had presents for him. The latter, delighted with the event, unsuspectingly invited Fu Chieh-tzŭ to drink wine. When the King was intoxicated, Fu removed the royal screen and told two of his sturdy followers to stab him from behind. The nobles who were sitting round all fled. Fu Chieh-tzŭ then made an announcement, saying: "The deed just accomplished is a retribution for the King's crimes against the Han. The Emperor sent me to put him to death. You must set up the King's younger brother, Wei-tʻu-chʻi, now in China, as King." The Chinese troops, who had just arrived, not daring to move, he gave orders that the kingdom of Lou-lan should cease to be.' The king's head was severed from the body and 'suspended at the north gate', apparently of the Chinese capital. 'Wei-tʻu-chʻi was then set up as King, and the kingdom re-established under the name of *Shan-shan*, for which a seal of investiture was engraved.'

Military colony established at I-hsün.

The new ruler had one of the ladies of the Imperial court bestowed on him as a consort and was given a send-off from the capital marked with every honour. Evidently the prestige thus imparted would not suffice to assure Wei-tʻu-chʻi of his safety, for on his departure the new king is said to have 'himself presented the following request to the Emperor: "I have resided long in China, and now that I am returning weak and single-handed, while there is still a son of the former King living, I fear I shall be assassinated. In our kingdom there is the city of *I-hsün*[19] (Wylie: *E-tun*), where the land is rich and productive; may I request the Han to send a general to plant a military colony there, and collect the grain, so that your servant may rely upon his prestige?" The Han monarch thereupon sent a cavalry leader with forty subordinates to cultivate the fields at I-hsün (E-tun), in order to guard the place and soothe the people. After this a Protector-General was appointed and this was the beginning of placing officers in I-hsün.'

Position of Lou-lan capital.

The essential data which this account of the *Chʻien Han shu* supplies for the ancient geography

[18] Cf. Wylie, *J. Anthrop. Inst.*, x. p. 27. I have given the Chinese names according to the forms adopted by M. Chavannes in his translation of Li Tao-yüan's commentary, which contains an abstract of the *Chʻien Han shu's* record; see Chavannes, *T'oung-pao*, 1905, p. 567; also above, p. 325.

[19] In this form, *I-hsün* 伊循, the name is quoted from our text by M. Chavannes, *T'oung-pao*, 1905, p. 537, note 2. Mr. Wylie writes *E-tun*.

of the Lop region has already been discussed with reference to the statements furnished by Li Tao-yüan's commentary on the 'Book of the Waters'.[20] It was seen that the town of I-hsün, which Li Tao-yüan places to the south of the united course of the Tārīm and Charchan River, and which in his time had become the capital of Shan-shan, must be located at the present Charkhlik. It was further proved that the position of the town of Yü-ni, which is named by the *Ch'ien Han shu* as the capital of Shan-shan or Lou-lan, and which in Li Tao-yüan's time was known as the 'old eastern town', corresponds to the ancient site of Mīrān. With these locations the account given by the Annals as to the origin of the Chinese military colony at I-hsün fully agrees; for, as M. Chavannes has rightly recognized,[21] the locality selected for this colony must have been within an easy distance of the capital if the presence of a Chinese garrison planted there was to afford the support which the new king of Shan-shan needed.

Name of *Lou-lan* changed to Shan-shan.

The evidence thus afforded by the *Ch'ien Han shu* enables us to feel certain that, from about 77 B.C. onwards, the capital of the 'kingdom' corresponding to the mediaeval and modern Lop was situated in the present Charkhlik tract. It also supplies the definite date when the name of the territory was changed from the original *Lou-lan* to *Shan-shan.* There is nothing in the record of the Annals to suggest that this change in the official Chinese designation was prompted or accompanied by any change in the position of the capital. But since this view has been put forward by M. Chavannes and after him by Dr. Herrmann,[22] though for different reasons, it seems necessary to examine the question thus raised more closely.

Supposed transfer of Lou-lan capital.

The reason which induced M. Chavannes to suggest, but with due critical caution, that such a transfer of the capital took place in 77 B.C. was the difficulty of otherwise reconciling the evidence. On the one hand, the position of I-hsün was established south of the terminal course of the Tārīm, and the records of later date placed Shan-shan in the same vicinity near Charkhlik; on the other, he had adopted a location for Lou-lan either at Pichan or Lapchuk, both on the Hāmi-Turfān route.[23] We have, however, already seen that this location was based on a misapprehension.[24] In reality the 'ancient Lou-lan', which the *Wei lio* mentions on its 'route of the Centre', is identical with the ruined 'site of Lou-lan' to the north of the Lop-nōr, but yet within the Lop region. The exploration of these ruins, first discovered by Dr. Hedin in 1900, has convinced me by conclusive archaeological evidence that the 'route of the Centre', which the *Wei lio's* author knew about the middle of the third century A.D., passed this site, and that it was not abandoned until about the middle of the fourth century. Documentary evidence obtained at the site, and discussed in Chapter XI, shows that the Chinese military station represented by those ruins was actually called *Lou-lan* in local Chinese records of the third and fourth centuries.[25]

Ancient name retained for colony north of Lop-nōr.

This proves that the *Wei lio* and the source used in Li Tao-yüan's commentary on the *Shui ching* were right in giving the name of *Lou-lan* to the Chinese military colony which guarded the route along the north side of Lop-nōr in their own time. But the continued application of the archaic name *Lou-lan* to this particular locality cannot be accepted as proof that the capital of the whole Lop tract or *Lou-lan,* as the Chinese called it down to 77 B.C., must also necessarily have stood there. It is simple enough to assume that the Chinese retained in use or revived the antiquated designation of *Lou-lan* for that part of Lop through which the most direct route westwards from Tun-huang led, and which to them was consequently of special importance, while for the capital of

[20] Cf. above, pp. 325 sqq.; for Li Tao-yüan's record, see Chavannes, *T'oung-pao,* 1905, pp. 567 sqq.

[21] Cf. Chavannes, *T'oung-pao,* 1905, p. 533, note.

[22] Cf. Herrmann, *Seidenstrassen,* pp. 103 sq.

[23] Cf. in particular M. Chavannes' discussion in his notes on the *Wei lio's* mention of 'ancient Lou-lan', *T'oung-pao,* 1905, pp. 531 sqq.

[24] See above, pp. 336 sq., note 13.

[25] See below, chap. xi. sec. viii.

the territory situated to the south of Lop-nōr and the terminal Tārīm the new official designation of *Shan-shan* took root.[26]

Importance of route north of Lop-nōr.

On the other hand, the transfer of the capital southwards which M. Chavannes and after him Dr. Herrmann have suggested involves a difficulty with regard to the political change in connexion with which it is supposed to have taken place. There can be no doubt that the deeds recorded in 77 B.C. were planned to strengthen the Chinese hold over the Lop region. Now all geographical and historical considerations point to the fact that the part of this district which was of chief strategic importance to the Chinese during Han times was the tract north of the Lop-nōr marshes and along the foot of the Kuruk-tāgh, through which the most direct route between Tun-huang and the northern oases of the Tārīm Basin passed. Had the seat of the Lou-lan chief stood here before 77 B.C., it would obviously have been an advantage for Chinese policy to let it remain there; for it would have been far easier to provide the support and control which the new king needed on that great military and trade road than away to the south of Lop-nōr where the military colony of I-hsün was actually established. And the whole story of China's relations with Central Asia shows that economy of effort has, here as elsewhere, always been a characteristic feature of its strategy and statecraft.

Shan-shan identified with Lou-lan by *Ch'ien Han shu.*

Nor does it seem to me safe to brush aside lightly the explicit statement of the *Ch'ien Han shu* which asserts that 'the original name of the kingdom of Shan-shan was Lou-lan'. We have seen above that all Chinese records, from Later Han down to T'ang times, uniformly persist in correctly showing Shan-shan in the position of Lop, and in placing its chief settlement to the south of Lop-nōr. We have also seen that this position of the 'capital' of the territory was dictated by physical conditions which have continued to the present time in spite of all changes. In view of this consistency of later historical evidence during prolonged periods, the testimony of the Former Han Annals, which fully conforms with it, has an additional claim to credence. Moreover, the reliance which it deserves in this case is considerably strengthened by the fact that the events related of 77 B.C., with the change of Lou-lan into Shan-shan, are separated by only about a century and a half from the time when the extant text of the *Ch'ien Han shu* was composed by Pan Ku († A.D. 92).[27]

Summary of ancient Lop topography.

It will here be convenient briefly to summarize the main results of geographical and antiquarian interest which our examination of the earliest Chinese records concerning the Lop region has yielded. In the first place, it is certain that the name *Lou-lan*, subsequently changed into *Shan-shan*, corresponded to the mediaeval and modern *Lop* in its widest sense, and was applied to a territory which comprised the whole of the depression between Kuruk-tāgh and Āltin-tāgh, with the terminal courses of the Tārīm, Charchan, and Konche Rivers and the Lop-nōr marshes fed by them. The population of the territory depended mainly on pastoral pursuits. The chief agricultural settlements were confined to the present Charkhlik tract, where streams coming from the snowy range south assured permanent chances of irrigation. In it was situated, certainly from 77 B.C. onwards, but probably earlier also, the political centre of the territory, the capital Yü-ni

[26] It would not be difficult to quote numerous instances in which Chinese nomenclature, old or modern, has utilized the local name of an earlier period for the express purpose of distinguishing the part of a territory, though there was no doubt that the original application of the term had been different. Thus when the present Keriya District (*hsien*) was separated in the eighties of the last century from the Khotan Prefecture (*chou*), it received the official designation of *Yü-t'ien* 于寘, though it is perfectly well known to all educated Chinese in Eastern Turkestān that this is the ancient designation of Khotan, now officially called *Ho-t'ien* 和闐.

[27] This argument would, of course, carry even more weight if it is assumed with Dr. Herrmann that the 'Notes on the Western Regions' embody in the main an official compilation dating from *circ.* 30 B.C.; cf. *Seidenstrassen*, pp. 35 sq.

being represented by the site of Mīrān, and I-hsün, with its Chinese military colony, by the present Charkhlik.

Ancient routes between Tun-huang and Lou-lan.

The territory was connected with Tun-huang and the westernmost part of the Chinese marches within the 'Great Wall' by two lines of communication, as at the present day. The longer, and probably less frequented, route led along the northernmost range of the Āltin-tāgh. The other passed along the desert depression beyond the westernmost point of the Tun-huang *Limes* (near the 'Jade Gate') by the present Tun-huang–Charkhlik track, and thus reached the easternmost extension of the ancient dry salt-encrusted lake-bed of Lop-nōr, near the wells now known as Kum-kuduk. From this point the route bifurcated, one branch leading, as now, south-westwards along the southern shore of the ancient 'Salt Marsh' to Yü-ni (Mīrān) and I-hsün (Charkhlik), and thence on towards Khotan.

Ancient route past Lou-lan Site to Konche-daryā.

The other branch turned in a direction approximately west-north-west, passed the north-eastern extension of the dry 'Salt Marsh', and after crossing a great stretch of ground wholly devoid of water reached the old terminal course of the Konche-daryā, now known as the Kuruk-daryā ('the Dry River'). There the ruins of the Lou-lan Site attest the existence of a settlement which must have derived importance from the passage through it of the most direct route between China and the northern oases of the Tārīm Basin. Documentary evidence found at these ruins proves that the site was occupied by a Chinese military colony in the third and fourth centuries A.D., and that the ancient name of *Lou-lan* was applied to it. From this point the northern branch of the Tun-huang–Lop route, corresponding to 'the route of the Centre' of the *Wei lio*, continued in a north-westerly direction along the Kuruk-daryā and further on by the bed of the Konche-daryā, which still carries water. There a line of ancient watch-towers, first noticed by Dr. Hedin in 1896,[28] still marks this ancient high road leading to the long string of oases on the north edge of the Tārīm Basin.

Predominant importance of 'Route of Centre'.

From a variety of considerations connected with the main trend of Chinese political and commercial expansion westwards,[29] it may be safely concluded that the preponderating portion of the traffic which served it or resulted from it proceeded by this 'route of the Centre' as the most direct line connecting the 'Western Regions' with China. For the interests concerned in this traffic, the ground along the Kuruk-daryā, including the old station of the Lou-lan Site, certainly represented the most important part of Lop. This, perhaps, helps to explain the survival of the earlier designation of *Lou-lan*. But putting aside this question of traffic, the economic and political centre of Lop is clearly shown by the *Ch'ien Han shu*, as well as all later Chinese records, to have lain south, in the present Charkhlik tract. If this was the case after 77 B.C. and right through the period during which the 'route of the Centre', via the Lou-lan Site, was the chief channel for trade and political and military missions, the same condition of things is even more likely to have prevailed earlier, before the development of relations between China and the West had forced upon Lou-lan or Lop the rôle of an important link in a great artery of traffic.

[28] Cf. Hedin, *Reisen in Z.-A.*, pp. 75 sq. The account given of the construction of these towers, with layers of reeds between the courses of sun-dried bricks, clearly proves their early origin and closely recalls that observed in the towers of the Tun-huang Limes. Yet their good preservation led Hedin to attribute to them an age of only some centuries. [I made a careful survey of this line of watch-towers in March, 1915, and its results have fully confirmed the early date above assumed for its construction; cf. *Geogr. Journal*, 1916, xlviii. p. 208].

[29] One of the most striking of these indications is furnished by the position of *Wu-lei*, where the 'Protector-General of the Western Regions' during the Former Han period had his seat; cf. Wylie, *J. Anthrop. Inst.*, xi. p. 95. Wu-lei lay certainly between Kuchā and Korla, either at Chādir (cf. Herrmann, *Seidenstrassen*, p. 38), Yangi-hisār, or Bugur, and as all three are small oases, the choice of this position for the chief representative of Chinese power in the Tārīm Basin is only explained by the importance attaching to the high road leading through them.

CHAPTER X

THROUGH THE LOP DESERT

Section I.—FIRST VISIT TO MĪRĀN

Start from Charkhlik.

After three days of continuous efforts I completed at Charkhlik the preparations for my desert expedition. On the morning of December 6, 1906, I was able to start my column, which comprised fifty labourers for the proposed excavations and twenty-one camels. The latter were to carry five weeks' supplies for us all and the ice which would be needed to provide us with water while away in the Lop desert. My first goal was the 'site of Lou-lan', over a hundred miles to the north-east of the fishing hamlet of Abdal, the nearest inhabited place, and quite seventy miles from the nearest point where drinkable water could be found. The necessity of husbanding time was obvious in view of the other difficult tasks before me which were only practicable during the cold of the winter. I was obliged, therefore, to take to that distant site as many diggers as I could possibly keep supplied with water. The problem which the latter consideration involved was much complicated by the uncertainty as to whether ice would already have formed at the salt springs of Āltmish-bulak and by the limitation of the available camel transport. In spite of all local efforts, the resources of Charkhlik proved insufficient to add more than seven weakly animals to the eight of my own caravan and six that I had hired from Charchan.

Route via Mīrān.

Anxious as I was, for reasons of transport and supplies, to reach the 'Lou-lan Site' as early as possible, I should not in any case have forgone the chance of paying on my way a preliminary visit to the ruins of Mīrān, which our maps have shown ever since Prejevalsky's journey of 1876.[1] Abdal, near the commencement of the Kara-koshun marshes, was to be the true base for our march through the Lop desert north-eastwards, and the route leading to it via Mīrān was only some seven or eight miles longer than the usual one past the Kara-buran lagoons and the terminal Tārīm (see Map No. 57). But a special reason for an early visit to Mīrān was supplied by a fragmentary leaf of paper with Tibetan writing which had been brought to me by Tokhta Ākhūn, the Abdal hunter, when he joined me at Charkhlik. He declared that he had found it early in the year, while scraping what he described as the roof of a sand-filled dwelling within a ruined fort at Mīrān. The 'find' looked undoubtedly old, and, in connexion with what Tokhta Ākhūn could relate about remains of 'Būts' at other ruins, it determined me to spare a couple of days for a preliminary survey of the site.

Cultivation at Mīrān.

The two fairly long marches which brought me to Mīrān have been briefly described in my personal narrative.[2] The first, to the wells of Yandash-kāk, lay almost due east, skirting on the left an extensive area of low tamarisk-cones with patches of other desert vegetation; on the south there extended an absolutely bare glacis of Piedmont gravel to the foot of the outermost Āltin-tāgh range. On the following day, for some twenty-seven miles, we crossed a bare gravel Sai, entirely devoid of vegetation, until we came to the broad flood-bed of the Jahān-sai; beyond it we encamped in the belt of comparatively luxuriant vegetation which flanks the branch known as the stream of

[1] See above, p. 319, note 8.

[2] Cf. *Desert Cathay*, i. pp. 348 sqq.

Mīrān. Its water has been utilized by the people of Abdal for a generation or two to create a small colony called the Mīrān 'Tārīm', where they cultivate fields of wheat without abandoning their fishermen's life by the river.[3] As was to be expected among people but recently attracted to agricultural pursuits, neither the extent nor the method of cultivation seemed equal to the opportunities offered by the lively stream, then but lightly frozen over.

On December 8 I paid my first visit to the ruined site that lies to the east. After crossing the stream and passing for about half a mile through a fertile belt, partly cultivated, the caravan track we were following emerged upon a scrub-covered steppe, and, a short distance beyond, upon a bare waste covered with fine gravel. It seemed to stretch away eastwards absolutely level, broken only by a succession of low and narrow ridges. The curious straightness of these and their roughly parallel direction running from south to north at once suggested that they marked the alignment of old canals. As soon as I reached the first, I came upon a completely ruined mound of solid brick masonry, the unmistakable remains of a Stūpa, and from its top I sighted groups of other ruins (see plan, Plate 29) cropping up on the wide level flat eastwards like low islands on the surface of a lake. There could be no doubt that I stood on an important site.

Ruined Stūpas at Mīrān.

In view of the detailed account of later explorations on this site which I shall have to give in Chapters XII, XIII, the record of the observations made on this rapid survey may be restricted to the narrowest compass. The first group of ruins reached after proceeding for some 600 yards further east (Fig. 111) proved to consist of four buildings, of no great size but of remarkably solid construction, and all unmistakably of great age. Of the two which were undoubtedly Stūpas one, seen in Fig. 111 to the right in the middle, immediately attracted my attention by the unusual feature of a rotunda-like structure which must once have enclosed it. Another ruin, seen to its left, seemed to contain the remains of a square shrine solidly built with sun-dried bricks of unusual hardness. But the heavy masonry débris which filled and covered it made it impossible to identify it without excavation.

Ruined fort of Mīrān.

Without waiting to examine smaller remains which could be seen rising on wind-eroded terraces both to the south and north, I hurried on towards the old fort of which Tokhta Ākhūn had spoken as the principal ruin of the site. Seen from afar and over ground of such absolute flatness it looked quite imposing. But when I approached it after a further tramp of over a mile, and entered it by clambering over the badly breached west wall, I could not help feeling disappointed. The crumbling walls and bastions were massive enough and rose still high in parts; but their inferior construction and the irregular shape of the fort (as seen in the subsequently prepared plan, Plate 30) seemed to suggest a comparatively late date. There will be occasion further on to describe the details. Here it will suffice to state that the whole formed an irregular quadrangle with walls of about 240 feet in length on the two longer faces, which looked to the east and the north-west. Oblong towers of varying dimensions jutted out at the corners. Of the bastions guarding the centre of each face the one to the south (see Fig. 113) was particularly striking. Projecting about thirty yards beyond the line of the wall, and still rising to a height of about forty-three feet, it looked like a keep or donjon.

Interior of fort.

The interior of this desolate stronghold was quite bare, without a trace of superstructures on the surface. But I could not doubt its age when I noticed that, within the circumvallation and near the west face, wind-erosion had scooped out a depression fully ten feet below what layers of stable refuse marked as the original ground level. The surface sloped down from the east wall, behind

[3] [On my return in 1914 I found the colony permanently occupied by the Abdal people who had forsaken their semi-nomadic settlement on the Tārīm. Under the impulse given by an energetic young Amban they had established a hamlet with dwellings relatively well built of mud-bricks on the western bank of the main river-bed.]

which a layer of sand and fine gravel had accumulated, evidently blown across by the prevailing north-east winds. It was here, not far from the inner north-east angle which had afforded special protection, that a few wooden posts rising a foot or so above the gravel surface had attracted Tokhta Ākhūn's attention when he visited the ruin in the preceding spring.

Ruined quarters within fort.

While digging here single-handed he had come upon what looked to him like the brushwood layer of a roof, and amongst it he discovered the piece of paper inscribed with Tibetan which he had brought to me at Charkhlik. It was obviously the best place for my intended trial excavation. So I set my men to work on a line stretching along the east wall and soon had the satisfaction of seeing a row of small apartments emerging from below the cover of sand and gravel (Fig. 114). They were all built of brick, with rough posts of Toghrak wood to support a roofing made of tamarisk branches with earth above. Except that they were ranged more or less parallel to the east wall of the fort, as seen from the plan (Plate 30), the disposition of these little rooms was very irregular. Among those cleared in the course of that and the following day's trial excavation (M. I. i–vii), the largest measured only sixteen by eleven feet, and in some of the smaller ones the width was barely five feet.

Finds of Tibetan records.

The small size and roughness of the half-underground hovels were compensated by the rich antiquarian contents of the refuse which seemed to fill them to the roof. No sooner had the digging begun than numbers of pieces of paper and wood inscribed in Tibetan cropped up. The layers of straw, chipped wood, and decomposed dirt which the occupants had left behind, or which had been thrown in when these hovels were turned into dustbins, continued to yield such records, complete or fragmentary, right down to the bottom. From the room M. I. i, where Tokhta Ākhūn had made his find, over forty pieces were recovered, while in the group of small closets marked iv the number of such 'finds' rose to 136 by the second day.

The great majority of these Tibetan records consisted of narrow slip-like tablets of wood, from six to eight inches in length and up to two inches wide. When complete, they usually showed an oblong seal cavity at the left end, thus clearly proving the secular nature of the contents. Documents of this kind seemed to predominate also among the records on paper, consisting mostly of small and rather flimsy sheets, which recalled my corresponding finds at Dandān-oilik. In some instances these thin sheets were found still neatly folded up, as though meant for dispatch, and bearing seal impressions in red paint. But by the side of such miscellaneous remains of correspondence, &c., oblong leaves, with neatly written text between regularly ruled lines, also turned up. In these it was easy to recognize fragments of Pōthīs with religious contents, as script, shape, and material alike closely resembled those of the Kanjur fragments which I recovered in 1901 from the T'ang fort at Endere.

Miscellaneous relics of Tibetan occupation.

Remains of implements of all sorts, articles of clothing, arms, &c., were recovered in equal abundance from these deep deposits of rubbish. Leaving the description of them and of the Tibetan records from this site for a later chapter, I will here only mention the many curious pieces of scale armour, made of hard leather and lacquered in red and black. These were often still fastened together with the original interlacing thongs of leather, and by their arrangement proved that I was right in recognizing as parts of scale armour the few detached pieces of hard leather, with threading holes, which had come to light during my first excavations at the Niya Site.[4] Some chronological interest attached to the discovery of two large and intact jars (Fig. 87), each measuring two feet in diameter and bearing below the neck an engraved Tibetan character. The manner in which these jars were fixed in small raised recesses between the rooms ii and iii, v and vii showed clearly that they were used for the storage of liquids while the quarters were actually

[4] Cf. *Ancient Khotan*, i. pp. 374, 411; also p. xvi.

inhabited.[5] Everything pointed to the conclusion that the structural remains of the ruined fort and the deep deposits of rubbish—rich in archaeological plums and remarkable, too, for their dirt—accumulated within them, all belonged to a protracted period of Tibetan occupation which in the light of available historical evidence could safely be assigned to the eighth or ninth century A.D.

Temple ruin M. II.

It seemed hard to leave unexhausted, even for a time, so promising a mine as the profuse antiquarian haul of that first day had revealed. But when, on the following morning, I left the excavations in the fort to be continued under Naik Rām Singh's and Chiang Ssŭ-yeh's supervision, and proceeded to a rapid preliminary examination of the ruin, about a mile and a half to the north-east, of which Tokhta Ākhūn had spoken as showing remains of sculptures, I soon convinced myself that, by settling down to a complete clearing of Mīrān, I should risk too long a delay of my expedition to the ruins in the north of the Lop-nōr desert. And against such a course there were the gravest practical reasons. The ruin proved to be that of a Buddhist shrine, with its central portion rising as a solid mass of masonry about forty-six feet long and thirty wide. Above the débris encumbering the north-east side of the base there still showed remains of stucco relievos occupying niches divided by architectural decoration of good design. I cleared a small portion of the base on that side, and soon came upon fragments of stucco sculptures of large size, including a well-modelled colossal Buddha head, that closely resembled in style the relievos of the Rawak Stūpa.

Further exploration of Mīrān postponed.

It was impossible to be mistaken in attributing the temple to a period far more ancient than that of the Tibetan fort. Various observations made it probable that a site of considerable antiquity had been reoccupied here as in the case of Endere. It was clear that in order to secure adequate time for the careful excavation of this temple and of other ruins of earlier origin, I should have to revisit the site after my return from the ruins northward. Fortunately the vicinity of Abdal, where my base was to be established, and which would have to serve also as the starting-point for the desert journey to Tun-huang, made it easy to shape my plans accordingly. So after a further rapid reconnaissance of the whole site I returned to the fort, where the excavations carried on in my absence had yielded interesting finds. By nightfall I had had everything filled in again as a precaution against 'exploration' by 'treasure-seekers'.

Section II.—PAST THE TERMINAL LAGOONS OF THE TĀRĪM

Start from Mīrān.

On the morning of December 10 I set out from Mīrān for the journey to the ruins of 'Lou-lan'. On the preceding evening Surveyor R. S. Rām Singh had rejoined me from Charkhlik. He was suffering from rheumatic fever, and consequently needed a camel to ride from the point where the want of water would oblige us to leave our ponies behind. This necessitated a still more careful calculation of the weight of the indispensable food-supplies, baggage, and ice which we could carry into the desert on the available twenty camels. I found myself obliged to reduce the total number of labourers to be taken with us to thirty-five. In addition, there were fifteen in our own party, including camel-men and Lop hunters, for whom the necessities of life had to be assured during protracted operations in the waterless desert. The excavations at Mīrān had provided a useful test, and it was the least efficient of our diggers who were paid off and sent back to Charkhlik before starting.

March to Loplik hamlet at Abdal.

The march of some nineteen miles which brought us northward to the Tārīm led along the

[5] These jars were carefully re-buried before I left the Mīrān ruins on December 10 for the march across the Lop desert. But on my return to the site in January I found them unearthed again and broken, the result of some attempt at 'treasure-seeking' which the men of a caravan encamped at Mīrān were said to have indulged in. For two frs. recovered, see M. I. 0063 in List, Chap. XIII. sec. ix.

dying course of the Mīrān River over ground typically illustrating the successive stages of a terminal river course in the Lop depression. For about six miles we passed through a belt of luxuriant Toghrak jungle extending along flood channels which in places retained pools of water already hard frozen. Then the riverine tree growth gave way to a zone of tamarisk-cones and occasional reed-beds gradually thinning out. For about ten miles onwards our way lay across a bare and almost level salt-encrusted plain with scarcely a tamarisk upon it. Its appearance clearly indicated periodical inundation from the Lop-nōr marshes eastward. A stretch of actual marshy soil with scanty scrub was crossed about two miles before reaching the slightly raised ground on the right bank of the Tārīm occupied by the little hamlet of Abdal. This wretched collection of fishermen's reed-huts represented the most notable place for those Lopliks who still cling to their traditional ways of life (Fig. 91). For such scant observations as I was able to gather about them here and elsewhere on the Tārīm I may refer to my personal narrative.[1] It is striking evidence of the great change which the economic conditions of Loplik existence are now undergoing more and more rapidly, that on my visit to Abdal in 1914 I found the settlement practically abandoned through the removal to the new colony established within the cultivated area of Mīrān.

Depot left at Abdal.

At Abdal I left behind a depot of whatever baggage and supplies could possibly be spared, as well as Chiang Ssŭ-yeh, who, eager as he was to share my desert explorations, could not, like the rest of us, have faced on foot the long trying tramps before us. The river here, reduced to a single well-defined bed, only about 48 yards in width but of considerable depth, was still clear of ice. It was strange to think that this narrow channel, with a current of less than two yards per second, contained all that remained of the united drainage sent by the great snowy ranges of the K'un-lun, the Pāmīrs, and the T'ien-shan into the huge basin of the Tārīm. A ferry constructed beforehand out of five Loplik dug-outs allowed all the camels together with the much-reduced *impedimenta* to be taken across to our camp on the left bank.

Geographical questions concerning *Lop-nōr*.

The journey of seven days, which carried me from this last inhabited place to the 'Lou-lan Site', lay across a portion of the Lop desert which presents features of considerable geographical interest owing to their special bearing upon the much-discussed question of the ancient extent and position of Lop-nōr, to use the familiar Mongol designation for the terminal lake or marshes of the Tārīm. The journey also offered plentiful experiences of a personal nature illustrating the peculiar difficulties and hardships which must necessarily attend explorations over so extensive a desert area wholly devoid of any sort of food or even of water. The account contained in Chapters XXX and XXXI of *Desert Cathay* makes it unnecessary to repeat here a detailed description of these experiences and of the efforts which it cost to conduct my large party in safety and in good time to the chosen goal.

Lop desert Explorations of 1914–15.

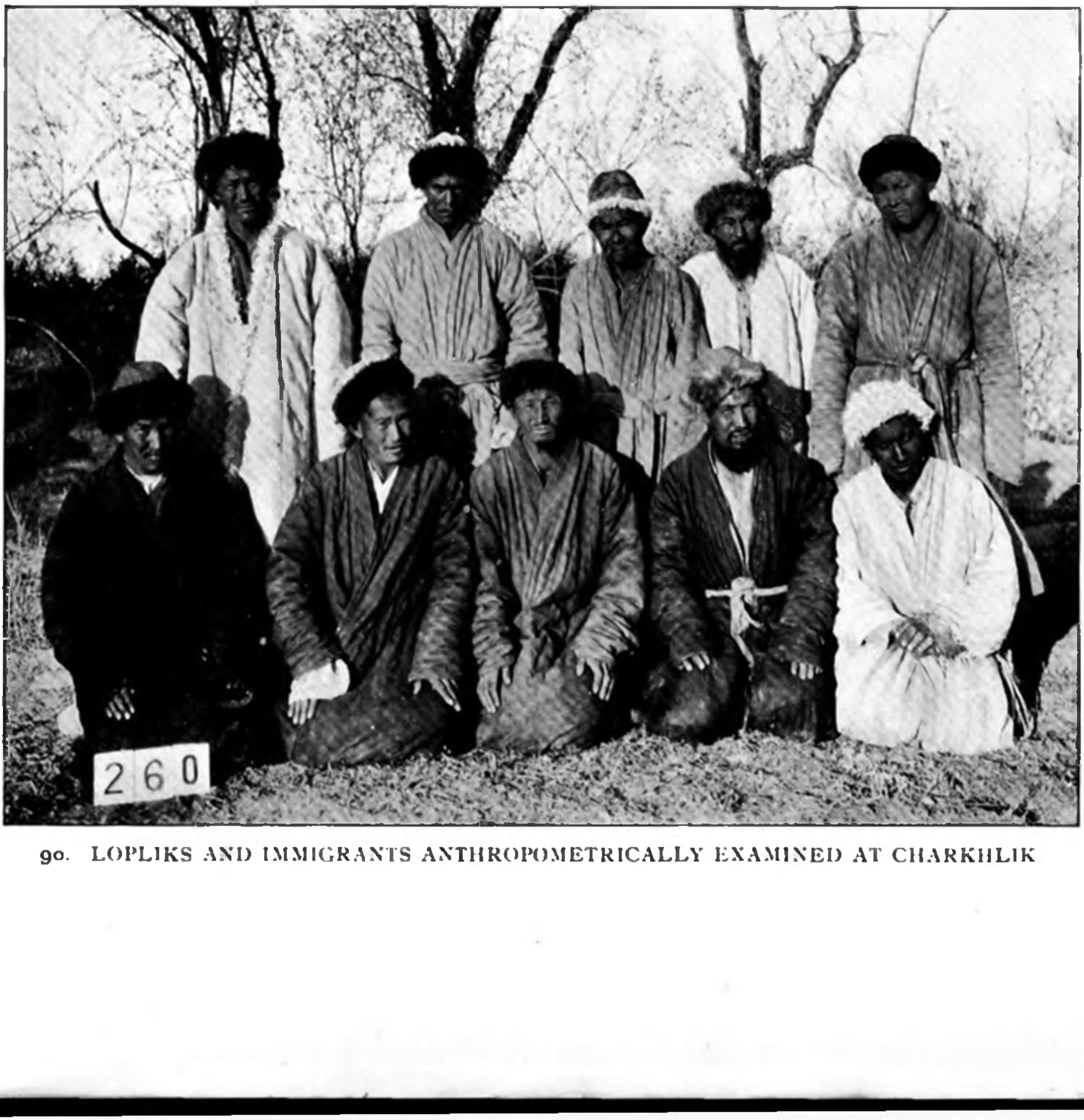
Nor shall I attempt to explain and discuss here in detail the views which the topographical and other observations made on this desert crossing led me to form as to the important geographical question of the changes undergone by the Lop-nōr region during historical times. The far more extensive and prolonged explorations effected during 1914–15, in the course of my third Central-Asian journey, have produced so much more new and exact evidence that I must necessarily postpone my general review of this question until it has become possible to make the fresh materials readily accessible for reference and examination.[2] In the meantime, however, the

[1] Cf. *Desert Cathay*, i. pp. 341 sq., 354, 428, 502. See also Joyce, *Notes on the Physical Anthropology of Chinese Turkestan and the Pamirs*, R. A. I. xlii. pp. 450 sqq., and below, Appendix *C*, for anthropometrical materials collected by me.

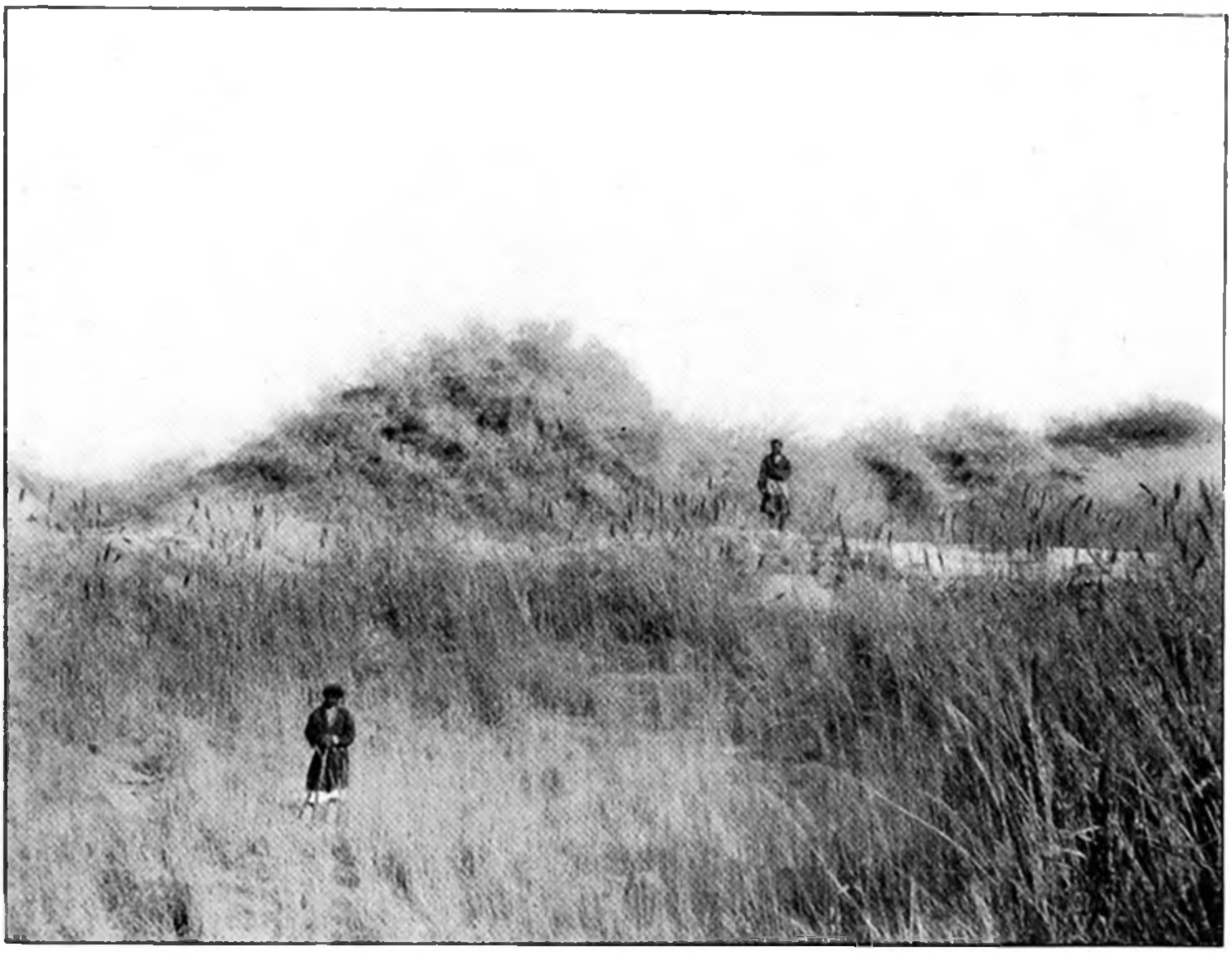
[2] For a brief notice of these new surveys and of the light thrown by them on the so-called 'Lop-nōr problem', cf. my *Third Journey*, *Geogr. Journal*, 1916, xlviii, pp. 121 sqq.

P. 350

88. SMALL RUINED MOUND TO NORTH-EAST OF L. A. STATION, LOU-LAN SITE.



90. LOPLIKS AND IMMIGRANTS ANTHROPOMETRICALLY EXAMINED AT CHARKHLIK



89. REMAINS OF MERDEK-TIM SEEN FROM SOUTH OF CIRCUMVALLATION.
Man standing on top of clay rampart.

91. LOPLIKS ANTHROPOMETRICALLY EXAMINED AT ABDAL.
Tokhta Ākhūn and Mullah third and fourth from left in front row.

A

B

92. VIEW TO EAST FROM RUINED STŪPA, LOU-LAN SITE, ACROSS WIND-ERODED GROUND.
Ruined dwelling L. A. IX in foreground. Decayed Stūpa mound on extreme right. A B marks line of joining with Fig. 93.

A

B

93. VIEW TO SOUTH-EAST FROM RUINED STŪPA, LOU-LAN SITE, ACROSS WIND-ERODED GROUND.
Part of ruin L. A. I in foreground. A B marks line of joining with Fig. 92.

geographical and archaeological observations bearing on this question which I made when first on my way to the ruins of Lou-lan are worthy of record, and these I intend to give here even if their detailed interpretation must be left for a later publication.

Terminal lagoons of the Tārīm.

Our march on December 11 (see Map No. 61) led first along the narrow winding bed of the Tārīm for about five and a half miles to a lagoon known as Ak-köl, where the reed-huts of Kum-chapkan, a small Loplik fishing station, could be sighted some two miles off to the south-east. Then the track of hunters and fishermen which we were following left the river, which here bent southward, and continued to the north-east across a monotonous steppe covered with reed-beds and scanty tamarisk-cones. Flocks of sheep owned by the Lopliks frequent it at intervals. After another eight miles we reached the bank of a marshy lagoon known as Ālam-khōja-köl, which held fresh water and proved to be already hard frozen. It was one of a long string of lagoons fed by the northernmost of the flood-beds into which the river was said to divide below Kum-chapkan. Mullah and Tokhta Ākhūn, our guides from Abdal, who from their hunting expeditions knew the ground to the north-east well, declared that the water of the lagoons and marshes, left behind by the summer floods of the Tārīm, grew more salty and froze later the further they were from the head of the great marshy delta to which the name *Kara-koshun* is collectively applied by the Lopliks. So camp was pitched by the lagoon, and most of the night was spent in cutting slabs of ice which, packed in big bags of coarse wool, were to assure our water-supply for four weeks.

Supply of ice taken.

Next morning nine camels were put under heavy loads of ice, and in addition smaller bags were placed on the thirty donkeys we had brought to help in carrying ice and supplies to a point in the desert which might serve as a sort of half-way depot. The camels were given a long drink, the last they were to have for weeks. Though all these arrangements caused delay in the start, a march of about eighteen miles was accomplished that day; for the ground was still easy. The fishermen's track, along which we moved at first, took a more northerly turn in order to avoid what was then a marshy expanse with lagoons fed from the Yangi-su, but which, on my return in 1914, had completely dried up. After passing over reed-covered steppe for six miles, we skirted a couple of lagoons with water which tasted distinctly salt and had not yet formed an ice-crust. A *shōr*-covered dreary plain with scanty reed-beds was next crossed to a lagoon known as Chöl-köl (13 miles), presenting a large open sheet of water.[3] A dry well-marked channel, before probably feeding it, had been passed at 10 miles on our left. Beyond the Chöl-köl live reeds and tamarisk scrub grew more frequent until we reached the dried-up lakelet known as Yaghizmak-köl, where nightfall obliged us to halt.[4]

Lagoon of Chainut-köl.

On the morning of December 14 the ponies which had carried me and my own men so far were sent back to Abdal, while we continued our march to the north-east, now all on foot except Surveyor Rām Singh. After about four miles we approached the extreme northern extension of a big sheet of water forming part of the Chainut-köl, which Mullah and Tokhta Ākhūn declared to be a terminal lake regularly fed by the Yangi-su branch of the dying Tārīm. Here they showed us, hidden among high reeds, a pool where the water was drinkable for animals and covered with a thin sheet of ice. The ground near it showed signs of having been used as a camping-place by the fishermen who during the last few years had visited the neighbouring lagoons. Here two of my men were left behind with the diggers' spare rations, which were to be sent on after the donkeys had

[3] The numbers of miles given here and in subsequent accounts of marches must always be understood as being reckoned from the last camp and as referring to actual marching distances.

[4] In Map No. 61. B. 1 the position of *Yaghizmak-köl* has been erroneously shown to the west of the name instead of close to Camp 119.

returned from the proposed half-way depot. As the donkeys could be given a good drink here, it became possible for us to take them and their ice loads two marches further out into the desert.

Determination of route to *Lou-lan* Site.

The point we had now reached by the shore of Chainut-köl had its special importance for the determination of the route which was to take us to the 'Lou-lan' Site. From Dr. Hedin's *Central Asia and Tibet* and the sketch-map accompanying the first volume,[5] I could see that the track we had so far followed was the same which had brought him to the lowermost Tārīm after he had struck the north-western edge of the present Tārīm delta or Kara-koshun on his journeys, in 1900 and 1901, from the foot of the Kuruk-tāgh across the Lop desert. Tokhta Ākhūn's testimony left no doubt that the place of our depot was practically the same as that at which Dr. Hedin had encamped, in March 1901, by the Chainut-köl.[6] Neither his big publication *Central Asia* nor the detailed maps accompanying it were then or before available to me. But the previously mentioned sketch-map sufficed to show that, in order to reach the ruined sites first discovered by him, I should now have to strike a route to the north-north-east, which would necessarily lead near those routes which he had followed in the reverse direction, and actually between them if our course was kept quite straight. But in the wastes of sand and clay before us there would be nothing to guide us except the compass. Neither Mullah nor Tokhta Ākhūn had ever visited the ruins from this side. However, for about a day's march further to the north the ground was still familiar to them from former hunting trips, and this allowed them to give me assurance on one point of importance. The large, shallow, newly-formed lake, which in March 1901 had obliged Dr. Hedin to make a considerable détour, had since almost completely dried up, leaving only scattered salt-water lagoons. Hence, provided that the position assigned to the ruins of 'Lou-lan' in Dr. Hedin's sketch-map was approximately correct, I could safely steer my course by the compass without having to fear détours and consequent loss of time.

March across dry lagoons of *Yangi-köl.*

After proceeding two miles further, we struck the southern end of a salt lagoon which lay within the area once covered by the *Yangi-köl* or 'New Lake', and to which the Loplik fishermen now specifically applied that name. No fresh influx of water was said to have reached the narrow curving depression for three years, and the fish in it seemed to be dying off rapidly owing to the increased saltness of the water. We found a great quantity of them stacked for drying near a reed-hut, and plenty of moribund or benumbed fish were caught by the men with their hands from under the thin ice just forming. Large stretches of boggy, salt-covered soil surrounded this lagoon and others that we passed further on, attesting the rapid shrinkage of these remnants of the 'New Lake'. Beyond a large crescent-shaped lagoon, which still retained water in its deeper northern portion, we came upon a succession of basins which showed signs of having dried up recently. We had marched across the largest of these, known to the hunters as Kurbān-kullu-köl, for about a mile and a half, when the abundance of young reeds and tamarisks on its north bank induced us to halt there for the night.

Intermittent inundation of *Yangi-köl.*

The information I gathered from Mullah and Tokhta Ākhūn in the course of the day's tramp accounted for the notable change which had taken place in the physical aspects of the ground since Dr. Hedin last saw it. According to them, the basins of the Yangi-köl area were filled with fresh water by the spring floods of the Yangi-su branch of the Tārīm for three years after his first visit in 1900. Since then (1903) no water had reached them, and the lagoons continued to shrink, while what water was left turned more and more salt. They had known the Yangi-köl depression since their youth, from hunting expeditions after deer and the like, and the opportunities I had, both on this and my subsequent visit to the Lop region in 1914, for testing various points of the information

[5] See *Central Asia and Tibet*, i. pp. 391 sqq., ii. pp. 173 sqq.

[6] See route maps, Hedin, *Central Asia*, i. Pl. 21 (1900, March 22–April 7) and ii. Pl. 53 (1901, March 20–April 7).

they gave me make me inclined to accept its substantial accuracy. From their fathers they had heard that the basins had before held water for certain periods, and Tokhta Ākhūn himself remembered an exceptional flood about 1892, which had carried water into the lagoons, within a day's march north of Chainut-köl. If such intermittent inundations had occurred for a generation or two past, it seemed easy to account for the thin beds of reeds, dead or living, which we found over extensive patches of ground here. On the other hand, the total absence of vegetation in certain intervening depressions was attributed by my hunters to the depth of the water which they periodically held.

Progress of drying up noted in 1914.

I may conveniently record here that the observations made on my renewed visit in 1914 proved the drying-up process in the area affected by such inundations from the Yangi-su or Kakmak-chash bed, as it is also known, to be still in progress. Throughout our march from Ālam-khōja-köl to Chainut-köl, on February 3, 1914, all the lagoons that we saw were dry, though our new route lay considerably more eastward and thus nearer to the feeding bed. The Chainut-köl itself held no water, except in the pool previously mentioned, and even the ice there tasted very brackish. Beyond Chainut-köl we kept close to the route of 1906 as far as Kurbān-kullu-köl, but saw no more sheets of open water, only boggy patches and a couple of very small salt-pools in the deepest portions of the basins. It was obvious that since about 1903 no exceptional flood had penetrated so far.

Transition from delta margin to absolute desert.

Our march on December 14 took us over ground where the increased difficulty of progress for our heavily laden animals was compensated to me by the interest which the observation of some novel features afforded. The sixteen miles covered that day carried us across what I recognized at the time as a transitional belt between the true marginal area of the present Tārīm delta and the absolutely barren desert northward once watered by an earlier delta. This impression, I may add at once, has since received full confirmation from the observations which our surveys of 1914 and 1915, carried across the same area and on three different routes all radiating from Kurbān-kullu-köl, have yielded. All day we passed a succession of dry, salt-covered lake-beds, large and small, with occasional salt-pools in their deepest portions, showing plainly that we were still within the Yangi-köl depression liable to inundation by exceptional floods. But after scarcely more than two miles from camp we left behind the area where subsoil moisture sufficed to maintain a continuous if scanty desert vegetation, and two miles further on we were met by the first indication of close approach to that zone of strongly marked wind-erosion which, as I knew from Dr. Hedin's description, constitutes the most striking feature of the northern portion of the Lop desert.

First erosion terraces and trenches (*Yārdangs*).

It was a belt of narrow ridges or terraces of hard clay, separated by small nullahs or trenches, as yet only three or four feet deep, but showing sharply-cut banks such as only the erosive action of wind and driven sand could produce in this region. The top of the terraces or *Yārdangs*, to use the convenient Turkī term adopted by Dr. Hedin, was invariably covered with a network of shallow parallel furrows, all running like the trenches in the direction of the prevailing winds which had carved them, from east-north-east to west-south-west. The soil exposed on the sides of the Yārdangs was a hard stratified clay, clearly the sediment of an ancient lake-bed, but showing to the eye no trace of saline impregnation. Erosion could not have been very long at work here, for in places the top of the terraces still retained a protective cover of matted dead reed stalks, all laid flat in the same wind direction. Elsewhere returning moisture was likely to have temporarily stopped denudation, and this would account for the dead reeds which, as I found in places, had grown between the Yārdangs.

More saline depressions.

Beyond this first outpost line of the wind-eroded clay desert we passed again flat saline ground with dry lagoons large and small. In their deepest portions they held rare pools with water so

brine-like that, in spite of the cold, it had nowhere yet frozen. The fact that such well-marked depressions seemed generally to stretch from north-east to south-west might suggest that they occupied patches of ground where wind-erosion had been particularly effective during some earlier and drier period. A narrow strip of ground which was crossed after a march of about eight miles, with living reeds and tamarisks, was proved by our surveys of 1914 and 1915 to extend several miles further to the west. In the same way a row of dead Toghraks between tamarisk-cones also dead, which we passed at about three miles further on, has been found to be in the continuation of an ancient river-bed traced in 1914 as coming from the north-west. In the light of our recent surveys we may, I think, now recognize in it the southernmost offshoot as yet traced of that ancient delta of the Kuruk-daryā which brought water to the Lou-lan sites, and to which repeated reference will be made further on.

First belt of dead riverine jungle.

After passing through another large dry basin which seemed to have held water only for a short time during the latest period of exceptional inundation, we emerged at last in the evening on an area where wind-eroded banks and 'witnesses', six or seven feet high, rose among low dunes. Bleached trunks of wild poplars and tamarisks of great size strewed the bare soil in abundance, unmistakably proving that a belt of luxuriant riverine jungle had once existed here. I received a clear impression of having left behind the terminal marsh region of the Tārīm for one where there was once running water and the possibility of tree growth. Shells of fresh-water snails lay scattered on the bare soil in plenty. About a mile and a half further on the dusk obliged us to pitch camp at the foot of high sand-cones covered with hoary tamarisk growth, some of which was still living. A well, dug in a hollow where the sand felt moist, yielded water at a depth of only five feet. It proved, as expected, utterly salt and undrinkable even for the camels. The vicinity, here demonstrated, of subsoil water suggested that water might have reached some of the previously passed saline depressions through percolation, and instances of this seemed well known to my Loplik guides.

Section III.—Across an Eroded Ancient Delta

Half-way depot of ice.

On the morning of December 15 I established, at Camp 121, the intended half-way depot by having all the bags of ice which had been brought on the thirty donkeys carefully stacked on the north side of the highest sand-cone. The donkeys, in charge of two extra men, were sent back by daybreak to Chainut-köl, whence after two days' rest they were to return with the labourers' reserve food supplies, as well as with fresh ice in the bags already emptied, and with some loads of reeds for the camels. A convoy of camels was to be sent back to this depot as soon as we had reached the ruins, for the purpose of fetching the remaining supplies. By careful timing I endeavoured to assure that our divided transport columns should be saved unnecessary waits and the consequent risk of exhaustion. But my chief care had to be directed to the prompt location of the ruins.

Continuous area of wind-eroded ground.

This would necessarily depend on our steering correctly, and the difficulty was much increased by the marked change in the ground before us. From the very beginning of the march I realized that we had now definitely passed out of the level flat of recent lake basins, where tamarisk-cones and the like could serve as easily recognizable guiding points, and had entered a zone of a very different character. Throughout the day's march, which by a great effort was extended to close on sixteen miles, we crossed ground cut up into a bewildering succession of wind-eroded ridges and trenches, where it was not covered by low dunes. The soil was a very hard greyish clay, and the Yārdangs which the wind had carved out of it ran regularly from east-north-east to west-south-west. The trenches dividing them always showed steep banks, the depths varying from about four to ten feet. The top of the terraces or plateaus left between these trenches was also carved by a network

of small furrows showing the same direction. It was obvious that corrosion by wind-driven sand was the main factor in sculpturing the surface of what had been the lake bottom of an earlier geological period.

Belts with dead Toghraks in rows.

The only portions of the ground protected against it for the time being were successive small belts where the drift-sand had accumulated in low dunes. It did not take me long to discover that these drift-sand areas generally corresponded to strips of dead forest, here usually stretching from west to east and thus right across the route we were steering. Almost everywhere the withered and bleached trunks of Toghraks and tamarisks, whether lying half-smothered on the ground or still rising upright, seemed to form more or less regular rows. Now, in the course of the many marches I had made along rivers of the Tārīm Basin where they pass through alluvial plains, I had often been struck, like other observers, by the fact that in the living riverine jungle belts the wild poplars, constituting the bulk of the timber, show the peculiarity of ranging themselves in rows parallel to the banks of the water-courses, large or small.[1] The same observation applies also to the dead forest strips so often encountered at ancient sites and elsewhere in the Taklamakān, near dried-up river branches. Hence the conclusion naturally suggested itself that these strips of dead forest which we passed through at intervals, varying that day from about three to four miles, had once grown up along channels of running water in what had formed part of an earlier delta.

Drift-sand retained by dead jungle

While kept alive by water, the trees and the scrubby undergrowth near them had helped to catch and retain the fine sand ever drifting across this basin, as can be seen to this day along the banks of all actual river channels passing into the Lop depression or the Taklamakān. When they died through loss of moisture, this cover would still be kept on the ground by the fallen thicket and in turn would help to protect its remains and the bank itself from erosion. It was intrinsically the same process as the one so often noticed at the Niya Site and other ruins in the Taklamakān, where ancient timber débris, refuse-heaps, rush fences, and the like had saved the original occupied ground and its old remains from being eroded to the present level of the surrounding open area. The cohesion assured by the roots of the dead trees and scrub would greatly help to keep off wind-erosion from the banks of the dried-up water channels, and to the same cause may probably be attributed the survival of the canal banks, which I had so often noticed at old sites rising high above the general scooped-out level.[2]

Dead trees and ancient river beds.

Where the rows of dead trees were near erosion trenches, the banks of the latter often seemed particularly steep and high; and it has since occurred to me as very probable that wind-erosion had there only continued the work begun by running water. But it was not until we had covered about twelve miles that we came upon a well-marked and far-stretching depression (shown in Map No. 60. C, D. 4 as 'Eroded Nullah', long. 89° 45′, lat. 40° 15′) which, with its considerable width and wall-like banks over fifteen feet high, distinctly suggested an ancient river-bed. The strips of dead jungle previously crossed on this march have been duly shown on the map with the dead tree symbols Ɏ Ɏ placed in rows to mark the direction. But it was at first difficult for me to realize their full significance, and even if I had recognized it from the beginning, I should not have been able to spare time for the collection of exact data as to levels, bearings, &c., while my attention was being constantly distracted by practical cares about the proper direction and safe progress of my desert column. We were proceeding over ground so much broken that even the maintenance of a correct course towards the compass point for which I was steering became a matter of anxiety. Though the terraces, crowned by rows of dead trees, and dunes which I usually chose for our plane-table 'fixings' always showed a distinct rise above the intervening ground of Yārdangs, it was impossible to get any distant outlook or well-defined landmarks. In addition to the confusing

Difficulties of progress.

[1] Cf. e.g. Hedin, *Reisen in Z.-A.*, p. 54 sq.

[2] Cf. above, pp. 129, 309, 347; below, chap. xxvi. sec. iii.

nature of the ground, incessant little détours were necessary for the sake of the camels, which could not negotiate steep banks, and whose feet were already sorely tried by the hard, cut-up surface of the Yārdangs. The Surveyor, whom rheumatism severely taxed in physical endurance and morale, was all through this desert expedition unable to render me effective assistance.

Ancient branches of Kuruk-daryā.

If, notwithstanding these drawbacks, I now feel justified in recognizing the successive strips of dead forest as indications of ancient water-channels, this is due to the definite evidence which three subsequently surveyed route lines across this desert area have yielded. The one which I followed at the close of December, 1906, on my way from the Lou-lan Site to the Tārīm, is recorded in Map 60. It led from north-east to south-west, and lay thus at a constantly increasing distance to the west of the route just described. There, too, at least five well-defined belts of dead riverine jungle were crossed, and their carefully observed direction from north-west to south-east, as seen in the map, clearly indicated that they marked southerly branches of the Kuruk-daryā, the ancient 'Dry River', which, as Dr. Hedin's explorations had already shown, once carried its water to the area of the Lou-lan ruins. Their diverging point, as suggested by our Lop surveys of 1914 and 1915, appears to have lain some distance to the west-north-west of the Lou-lan Site.

Later surveys of Kuruk-daryā delta.

An examination of Map No. 60 suffices to make it highly probable that these southerly branches of the Kuruk-daryā had their continuation in the ancient beds the existence of which I had been led to infer from the riverine jungle strips passed, between Camps 121 and 123, on my way to the Lou-lan Site. This supposition has since received full confirmation from the surveys which were carried out by us, in 1914 and 1915, on two different routes across the desert area separating the two former route lines. As the final adjustment and compilation of the map embodying these recent surveys has not yet been completed, it is impossible for me to discuss and illustrate here in detail the way in which they have linked up the riverine forest belts previously observed. It must be enough to state that the beds of the several conjecturally assumed river branches have now been actually traced at a number of points and the general direction of their courses determined. These led in each case first from north-west to south-east and then took a turn towards the great salt-encrusted depression eastwards which was proved to have once received the waters of the whole Kuruk-daryā delta.[3]

First relics of Stones Age.

The topographical conclusions thus arrived at as to the character and significance of the several belts of dead riverine forest crossed on our march to the Lou-lan Site have received full confirmation from antiquarian finds. It was not the physical aspect of the ground alone which suggested that the area we were moving across had been capable of occupation at some early period preceding the present stage, when, owing to complete desiccation and consequent denudation, it is undergoing a continuous process of erosion and deflation. We had scarcely proceeded for more than a mile from Camp 121, and had just cleared a belt of drift-sand full of dead wild poplars, when on the bare eroded ground beyond it relics of the Stone Age began to crop up in numbers. The first to attract my attention were two flakes of jasper (C. 121.0010, 0011, Plate XXX) and a small knife-like blade of the same material. As the men with me were encouraged to keep a look-out for such small objects, similar finds of worked stones followed in frequent succession wherever the ground was bare and exposed to wind-erosion.

Search for stone and pottery fragments.

As the soil north of the present Lop-nōr marshes right up to the foot of the Kuruk-tāgh consists entirely, except for drift-sand, of lacustrine clay or loess deposits, it was obvious from the outset that all stones picked up on this ground must have been brought there by the hand of man with some object. Fragments of very coarse hand-made pottery, grey, brown, or red, as well as

[3] Cf. regarding this ancient lake-bed and the area where the Kuruk-daryā debouched into it, my *Third Journey, Geogr. Journal*, 1916, xlviii. pp. 121 sqq. [See now for the topography of this ancient delta Sheets 29, 32 of my 1 : 500,000 Atlas.]

slags, were also met with at intervals over most of the march. The conditions under which our desert crossing was made obliged me to keep the line of our route as straight as possible. Search to right or left which would have caused delay was thus practically excluded. That the number of finds would have been far greater if a wider belt of ground could have been searched was proved by the experience gained in 1914, when I followed a different route on my march to the Lou-lan Site.[4]

Materials of worked stones.

In the List reproduced at the end of this section it has been found convenient to group and describe together all finds of small objects made on the wind-eroded desert ground south of the Lou-lan ruins. The description of the stone relics which form the great bulk of them is taken from notes which Mr. Reginald A. Smith, Assistant in the British and Mediaeval Antiquities Department of the British Museum, has been kind enough to furnish. As the same scholar has also made the collection of these stone remains the subject of a separate paper,[5] I may restrict myself here to a brief analysis of the main results arrived at. The great majority of the pieces of stone, whether worked or brought for use, are jasper. Chert, chalcedony, carnelian, and jade are also represented. All of them, it can be safely assumed, come from the south, where the K'un-lun range is known to abound in these materials.[6] Of the 140 pieces collected, about half are worked with a varying degree of finish, the remainder being flakes and splinters struck off by man but offering no distinct proof of having been utilized.

Evidence of local manufacture.

From the fact that among the specimens recovered are three undoubted cores (C. 121–122. 002; C. 122. 002, 006 a; see Plate XXX), it is certain that at least a portion of the worked stones must be of local manufacture. By far the most numerous among these are 'knife-blades', nearly sixty in fact, 'with single or double ridges showing that they were struck by people who understood the art of detaching regular two-edged flakes'. (See Plate XXX, C. 121. 0028, 0032, 0075; C. 122. 006, 008, 0027, 0052; C. 122–123. 009; C. 127–128. 003.) Such 'blades' appear in the palaeolithic period, but seem to have survived into neolithic times. Certain specimens illustrated by Fig. 25 in Mr. R. A. Smith's paper show one edge battered into a broad blunt surface for the forefinger to rest on in use, a form first attested in the La Madeleine cave period. Undoubtedly neolithic are the well-finished jasper arrow-heads, C. 122. 0023, 0054 (Plate XXX), of which one was found on the way from Camp 121, and the two jade celts, C. 126. 001, L.A. 00145 (Plate XXX), both of which were picked up in the area adjoining the Lou-lan sites.

Chronology of prehistoric occupation.

It is clear that the frequency of these finds, over a somewhat wide tract, definitely proves its having been occupied by men in prehistoric times. But the same physical factor, wind-erosion, which, on the one hand, allowed us to pick up these relics of the Stone Age with such ease on the surface, renders it difficult, on the other, to draw from them any definite conclusion as to the chronology of that human occupation. A number of interesting questions which these finds at once suggested could not be answered from their own evidence. Did these remains of the Stone Age belong to a single if, perhaps, protracted period, or was it only the erosion of the successive layers originally containing them which had brought here relics of widely separated periods to lie side by side on the present surface? Was it safe to assume that the difference in level between this surface and the top of the terraces protected by dead trees and drift-sand gave the measure of the extent to which wind-erosion had effected its work of scouring and lowering since the Stone Age? Or had water continued to make its way here down to a much later period or, perhaps, returned after a long interval of desiccation and consequent denudation?

[4] See my *Third Journey*, *Geogr. Journal*, 1916, xlviii. pp. 121 sq.

[5] Cf. R. A. Smith, *The Stone Age in Chinese Turkestan*, in *Man*, xi. (1911), pp. 81 sqq.

[6] Marco Polo mentions jasper and chalcedony as being brought down by the rivers of the Provinces of Pein (Keriya) and Charchan; cf. Yule, *Marco Polo*, i. pp. 191, 193 n.

Find of bronze arrow-head.

Fortunately, the first day's march on this ground brought a find which, small as it was, had the merit of being approximately datable, and important discoveries which I made in 1914, in an exactly corresponding position further west, have left no doubt about its interpretation. We had moved about four and a half miles from Camp 121 when, near a belt of dead forest showing besides Toghraks also trunks of dead Jigda or Elaeagnus trees, Tokhta Ākhūn's sharp eyes discovered lying on the ground a carefully finished bronze arrow-head, C. 121. 0050. Its shape, triangular in section to the point and hexagonal where bevelled down below for the shaft, accurately corresponds to the type represented by numerous bronze arrow-heads which were picked up near to or at the ancient station of Lou-lan (cf. C. 123. 001–003; L.A. 0017, 0069, 0082; III. 001; VIII–IX. 005), and of which a series has been illustrated in Plate XXIX. The same type is proved, by my very numerous finds along the ancient Chinese Limes, to have been in regular use by Chinese troops during the first centuries before and after Christ, as will be seen on reference to the specimens reproduced in Plate LIII. The necessary conclusion that the type was introduced into the Lou-lan region during Han times, and was probably manufactured in China, has since received very striking illustration from a discovery made in 1914 as I was tracing the ancient Chinese route through the salt desert east of Lou-lan, when I found a considerable collection of such arrow-heads scattered along the track, just as if they had dropped out of a convoy.[7]

Belt occupied in Lou-lan period.

The archaeological evidence furnished by that single arrow-head had been sufficient to warrant the belief expressed in my personal narrative that the ground north of Camp 121 was covered with riverine jungle and saw at least occasional visits of man in the early centuries of our era, when that arrow-head was likely to have been dropped by some hunter or soldier.[8] But it was left for my expedition of February, 1914, to reveal that, within a distance of probably not more than four miles west of Camp 121, the wind-eroded desert was hiding a ruined fort, L.K., which must have been occupied down to about the same time as the site of Lou-lan, i.e. the beginning of the fourth century A.D., and that, some six miles further to the north-west, there survived ruined dwellings of a small settlement, L.M., undoubtedly belonging to the same period.[9] This settlement had stood near the banks of a southerly branch of the Kuruk-daryā, the well-defined bed coming from the north-west and being still clearly traceable to the east-south-east, and this is the very direction which would take it to the strip of dead forest close to which the bronze arrow-head was found in 1906. This seems to me to establish the fact that the relic came from the lower portion of the same river-bed which passes the ruined settlement of L.M., and which down to the beginning of the fourth century A.D. must have carried water. The chain of topographical evidence is completed by the plane-table survey carried out by Surveyor Afrāzgul in February, 1915, along the north-western shore of the salt-encrusted ancient Lop sea-bed. This shows, in an exactly corresponding position, the winding terminal course of the same dried-up river branch, lined by dead Toghraks and tamarisk-cones, before it is finally lost in the great depression, covered with hard salt, which represents the true Lop-nōr of the earliest historical period.

No datable relics found northward.

No other datable relics from the hand of man, in fact none but objects of the Stone Age, were found on the remainder of the march to Camp 122, nor for some eight miles of direct distance beyond it. Almost the same observation applies to the line of traverse which I followed in February, 1914, from the ruins of L.M. to the 'Lou-lan Site', L.A. On this route the first bronze object, the fragment of an ornament, was found at a point approximately six miles north of Camp 122 of my previous journey. It is hence impossible to assert whether any of the ancient beds, marked by belts of dead jungle, which our routes crossed within this area—the close correspondence

[7] Cf. *Third Journey*, in *Geogr. J.*, 1916, xlviii. pp. 127 sq.

[8] Cf. *Desert Cathay*, i. p. 366.

[9] See my *Third Journey*, in *Geogr. J.*, 1916, xlviii. p. 121.

between our surveys of 1906 and 1914 shows that at least four of such must be counted—received water down to the period when Lou-lan was occupied. From what we know of the deltaic conditions of rivers in the Tārīm Basin, it seems improbable that all these successive branches of the Kuruk-daryā could have carried water during the same period. But undue importance ought not to be claimed for what is at present only negative evidence. It is, therefore, with some reserve that I put forward the suggestion that the absence of remains of the historical Lou-lan period over this area may be due to the fact that the river-beds traversing it have received no water since the close of neolithic times. If the area was already waterless during the centuries immediately before and after our era, no continuous occupation of it, even of a semi-nomadic type, was possible, and this would fully explain the absence of archaeological relics of historical times, such as metal objects.

Area exposed to longer wind-erosion.

In this connexion, another observation bearing on the present physical conditions of this ground suggests itself. If it was devoid of water, and its surface consequently left unprotected by vegetation, from the end of the local Stone Age, wind-erosion would obviously have been at work here for centuries longer than in the riverine belts which contained the ruined sites of 'Lou-lan' in the north and those of L.K. and L.M. in the south. This longer exposure to the scouring effect of wind-driven sand would necessarily have resulted—assuming the other factors of soil, wind, &c., to have been the same—in a more pronounced abrasion and lowering of the general surface level. Is it possible that the distinct depression indicated by Dr. Hedin's line of levels, which he measured in 1901 due south from the Lou-lan Site to the Kara-koshun marshes, between a point about ten miles and another about nineteen and a half miles south of the L.A. group of ruins, is directly due to the eroding force of the wind having longer exerted itself over this area?

Depression noted by Dr. Hedin.

The depression just referred to, which is discussed at great length and graphically illustrated in Dr. Hedin's scientific report,[10] corresponds approximately to the belt between 40° 15′ and 40° 23′ lat. in Map No. 60. D. 3. It thus falls within the area south and north of my Camp 122, over which I traced remains of the Stone Age, but none of the historical period of Lou-lan occupation. On such remarkably flat ground as Dr. Hedin's very valuable measurement of levels has undoubtedly proved the Lop desert north of the Kara-koshun to be, this depression must necessarily claim very great hydrographic importance. Yet its deepest point falls only 3·981 metres below the starting-point of Dr. Hedin's level series, on eroded ground near the main Stūpa of the 'Lou-lan Site' (L.A.), while the mean value of the levels measured between his stations No. 81 and No. 149 works out at 1·365 metres, or less than four and a half feet, below the starting-point.[11] Considering that the progress of erosion near certain ruins of the Lou-lan Site, as ascertained by the measured difference between the original surface level and that of wind-eroded depressions close by,[12] can be proved to amount in places to an average of over one foot per century, the above conjectural explanation may well deserve to be kept in view. In any case it will show that it is possible to account for the above depression without seeking, in this narrow and comparatively insignificant belt, the Lop lake-bed of the historical Lou-lan period, as assumed in a theory which Dr. Hedin has endeavoured to maintain by a series of elaborate and ingenious arguments. For a variety of reasons, both antiquarian and geographical, I cannot accept certain essential points of this theory; but, as already shown above, I must postpone a general exposition of the views I have been led to form regarding this 'Lop-nōr question' until the results of the extensive observations and surveys, made during the years 1914 and 1915, have been fully co-ordinated and worked up.

Dead reed-beds on Yārdangs.

In the meantime, two more points which have an interest for the interpretation of this depression may be noted here. On both my routes across this area I came upon ground where

[10] See Hedin, *Central Asia*, ii. pp. 234 sqq., 314 sqq., and *passim*, with Pl. 36, 37, 59.

[11] Cf. Hedin, *Central Asia*, ii. pp. 317 sqq., 326, and Pl. 37.

[12] See below, pp. 371, 375, 388, 390, 392.

patches of dead reed-beds covered the top of Yārdangs. On my route of 1906 they were met between four and six miles to the north of Camp 122 (about 40° 21–22′ lat.), and on my journey of 1914 I passed a similar belt of dead reed-beds, some three miles further west, in about the same latitude. In both places the appearance of the low but thick stubble of dead reeds struck me as not very ancient. The very different levels on which they were found, varying as much as eight feet according to the greater or lesser height of the Yārdangs above the same wind-eroded trough, suggested that these reed-beds had grown up during a temporary and somewhat recent submersion of the ground after it had already undergone the effects of prolonged wind-erosion. It has since occurred to me that the fact of Dr. Hedin's line of levels having shown the bottom of the above depression to descend, over a portion of its width which he roughly estimates at about 4 km. or two and a half miles, to an average of one metre (3′ 3·4″) below the level of the Kara-koshun during the spring-flood of 1901,[13] may possibly furnish an explanation. During a period of such exceptional floods water might have found its way from one direction or another into this belt, more deeply eroded than the rest of the Yārdang area south of Lou-lan, and remained long enough to cause a temporary growth of reeds, which, however, were bound to die again when those floods finally ceased.

Absence of salt-crust.

The other point to be noted is that nowhere on my two crossings of the belt corresponding to Dr. Hedin's depression did I come upon ground showing the hard salt-encrusted surface which invariably marks the bottom of dried-up ancient marsh beds in the Lop region. Nor was any other form of salt-impregnation met with. Further to the east, beyond Dr. Hedin's line of levels, a vast continuous area of the Lop desert was proved by our surveys of 1914 and 1915 to be covered by such a hard crumpled salt crust, and I have strong reasons to believe that the beds of the Kuruk-daryā delta, during the historical period of Lou-lan occupation, carried their water to its edge.

Wind-erosion watched at work.

During the night from the 15th to the 16th of December we experienced for the first time the blasts of the icy north-east wind of the Lop desert, which, unlike the winds affecting the Takla-makān, does not relent for long even during the winter, and which continued to hold us in its clutches during most of our stay in this region. Its erosive effect on the Yārdangs could clearly be watched, during the day's march, in the steady drift of sand which was undercutting the clay banks. The sand seemed to become, from here onwards, of a slightly coarser and heavier grain, and as the velocity of the wind was not great enough to raise its particles high, I could, before leaving camp in the morning, for the first time sight the reddish-brown line of the Kuruk-tāgh foot-hills far away to the north. Our progress towards it lay that day over ground bearing the same general character as that crossed on the preceding march. The closely packed Yārdangs showed the same uniform direction from east-north-east to west-south-west, and their tops were scored with furrows reproducing the same surface configuration on a small scale. The interrelation between this configuration of the ground and the wind which is its creator was brought home to us with painful directness by the fact that nowhere, even in trenches cut down to a depth of twelve feet, could the slightest shelter be found from that freezing blast. I particularly noticed that at the south-western end of the terraces, where one was naturally tempted to seek for some protecting bank, the cutting force of the wind was even increased. There the Yārdangs invariably ran out into a gradually sloping and narrowing tail-like end, where piercing currents of air met from both flanks of the Yārdangs, as if in an eddy, and carried on the work of abrasion with additional force.[14]

[13] Cf. *Central Asia*, ii. p. 326.

[14] This very phenomenon, carried back into an earlier geological period, accounts for the peculiar appearance of the salt-coated terraces or Mesas to which the early Chinese records of the desert route to Lou-lan apply the graphic designation of 'White Dragon Mounds', and the position of

Rows of dead Toghraks and tamarisk trunks were repeatedly met with, rising over hard gypsum-like banks close to ridges of low dunes. Their general direction seemed to be from west to east, but there were signs of winding to south-east and north-east that river-beds were likely to show on such ground. Finds of worked stones of the type already described and of coarse pottery, manifestly of neolithic origin, continued to be plentiful. Among the pottery there was the fragment of a wide-mouthed vase of ill-levigated clay, decorated with three incised bands of the herring-bone pattern (C. 122. 001. a, Plate IV). From about the sixth mile onwards, I thought I could recognize fragments of pottery of distinctly better make, showing a uniform black surface over a red, hard-fired core.[14a] They might well have prepared me for an approach to ground occupied down to a somewhat later period. Yet it seemed a welcome surprise when, about three miles further on, I came upon what at once suggested the appearance of a small 'Tati' of historical times.

Pottery fragments found.

For nearly half a mile the bare eroded soil was strewn with pieces of slag and potsherds, red or black on the surface, which by their finer grain and kiln-made look at once reminded me of the pottery débris met with about the Niya and other early sites (cf. for specimens C. 122. 004. a, 005. a). This impression was soon proved to be right by the large and fairly well-preserved bronze signet ring which Tokhta Ākhūn picked up here ($9\frac{1}{2}$ miles from C. 122) under my eyes (C. 122. 0021). Its flat oval bezel shows in intaglio two long-necked gryphons, one above the other. In shape and design the ring tallied closely with similar finds of the first centuries A.D. which I well remembered having obtained at the Niya Site.[15] A fragmentary square-holed Chinese copper coin, uninscribed, but unmistakably of a type associated with the Han period, was found close by, and furnished conclusive evidence that the pottery débris marked a site which must have been permanently occupied during the historical period.

Bronze ring with intaglio; Han coin.

Just before reaching it we had passed through a line of high sand-cones held together by dead tamarisk growth such as are typical of the banks of ancient river-beds, and which I often saw higher up on the Kuruk-daryā during my surveys of 1915. The dry river-bed that these tamarisk-cones indicated was perfectly recognizable, with a width of about 150 yards and rows of Toghraks on its banks, where we crossed it on February 10, 1914, some four miles lower down, to east-south-east. In its vicinity at different points we then picked up glass beads, the fragment of a well-finished bronze ornament, and three Chinese coins belonging to Han types. These finds furnish additional and conclusive archaeological evidence that this old river-course passed here through a belt of ground occupied by settlements of some kind during the early centuries of our era. It is worth noticing that this belt falls within the conjecturally indicated basin to which Dr. Hedin assigns the Lop-nōr lake of that very period, and which he assumed to have been covered with water northward up to the ruined station of Lou-lan.[16]

Occupation along ancient river-bed.

As we moved on beyond this 'Tati'-like ground, the cutting wind dropped slightly and for about half an hour light snow fell which limited the outlook. It lay only half an inch deep, and after the next morning's sunshine disappeared altogether except under the corniced edges of Yārdang banks facing north-west. Even thus it helped us to economize ice for a couple of days. When we had gone twelve miles, we passed through a long row of dead Toghraks, rising to ten feet or more and clearly marking an ancient water-channel. About a mile and a half beyond, dusk and the fatigue of a march rendered trying both to men and camels obliged us to pitch camp amidst a thin belt of dead tamarisk-cones.

which near the shores of the ancient dried-up Lop sea I traced in my explorations of 1914; cf. *Third Journey*, in *Geogr. J.*, 1916, pp. 126 sqq.; also above, p. 341.

[14a] For specimens cf. C. 122. 002. a, 003. a, 007. a–009. a.

[15] Cf. *Ancient Khotan*, i. p. 415, N. 0015, 0016 (Pl. XLIX) for shape; *ibid.* p. 414, N. 006 (Pl. L) for design of intaglio. For similar rings found at the Niya and L.A. Sites, see below, Pl. XXIX (L.A. 00107).

[16] Cf. Hedin, *Central Asia*, ii. Pl. 40, 59; pp. 238, 326, 360, 627, etc.

The night was made miserable by a violent north-east gale which nearly blew my tent down and left us all half-benumbed at the start next morning for the tramp which was to bring us at last to the ruins of 'Lou-lan'.

Last march to Lou-lan Site.

The hardships to which my labourers from Charkhlik were exposed and their consequent weariness rendered it a matter of serious concern for me that we should reach the eastern group of ruins, the main site for the proposed excavations, that day, December 17. I estimated the direct distance still separating us from it at only about eight miles to the north-east, if the position of Camp 123 on our plane-table and that indicated for the ruined site in Dr. Hedin's map were right. But I had not been able to sight any of the 'towers' which his description mentioned and which, I hoped, might serve us as landmarks. So I considered it safest to continue steering the due northern course which we had followed so far and which, I hoped, would allow us to strike the far-stretched line of ruins somewhere near its centre. The strain of anxious expectancy was lightened for me when, after marching for about three and a half miles over Yārdangs and low dunes, we picked up three *Wu-chu* coins of the Han type in quick succession. They were a definite proof that we were approaching a site of the historical period. About seven miles from our start we came upon a broad and well-marked bed fringed by rows of dead Toghraks and decayed tamarisk-cones and running west to east with a slight north-easterly bend. Mullah, with his sure topographical memory, at once recognized it as the ancient river-course he had seen in 1901, south of the ruins visited with Dr. Hedin.

Han coins found.

First ruined Stūpa sighted.

Beyond the riverine belt the eye ranged wider across the flat expanse of wind-eroded clay barrenness, with the outermost low range of the Kuruk-tāgh fully in view. The men now pushed on eagerly in the hope of earning the reward in silver which I had promised for the ruin first sighted. We had only gone a mile from the dry river-bed when one of them ahead, having climbed the top of a plateau-like Yārdang, shouted that he could see a 'P'ao-t'ai'. My glasses showed that the tiny knob, rising far away on the horizon eastwards, was really a ruined mound, manifestly that of a Stūpa. So the course was promptly changed, and the direction now favouring our progress along the Yārdang ridges, the five miles separating us from the mound were covered in two hours. It proved, as expected, the ruin of a Stūpa built of sun-dried bricks (see Fig. 97), and was the same near which Dr. Hedin had first camped on his return in 1901. Chinese coins of the *Wu-chu* and uninscribed types were picked up in numbers around it, and finds of bronze arrow-heads and of other small objects in metal had by now become frequent.

Arrival at Lou-lan station.

From this point three more mounds were in view, and among them Mullah without hesitation recognized the largest, which lay to the south-east, as marking the main group of ruins. The three miles' march to it led over frightfully eroded ground, and the succession of precipitous clay ridges and sharply-cut trenches between them, down to twenty feet and more in depth, had to be crossed at right angles. Darkness came on just as I reached the foot of the ruined Stūpa which stands out in this weirdly desolate expanse as the landmark of the ruined station of 'Lou-lan'. It was two hours before the convoy of our much-tried camels safely joined us. But as I sat by the big bonfire we had lit to guide them, the fatigues and anxieties of the trying desert march were forgotten, and only elation at having safely reached the goal in good time remained. I felt grateful, too, for Dr. Hedin's excellent mapping, which, notwithstanding the difference of our route lines and the total absence of guiding features, had enabled me to strike the ruins without a day's loss. When subsequently the results of our own plane-table survey for these parts, checked by astronomical observations and triangulation as far as the mountains south-west of Charchan, came to be computed, I was much gratified to find that Dr. Hedin's position for the site[17] differs from ours (see Map

[17] Cf. *Central Asia*, vol. iii. Pl. 51.

No. 60. D. 2) by only about a mile and a half in longitude, the astronomically observed latitude being identical.

Section IV.—LIST OF OBJECTS FOUND ON DESERT MARCHES NORTH OF LOP-NŌR

C. 121. 001–004. Four pottery frs., hand-made; ill-levigated clay hard-fired; prob. from one vessel. Found 15. xii. 06. Gr. fr. $2\frac{1}{2}'' \times 1\frac{1}{2}'' \times \frac{3}{16}''$.

C. 121. 005. (2 miles N. of.) **Pottery fr.**, hand-made; cf. C. 121. 001–4. $2\frac{1}{4}'' \times 1\frac{5}{8}'' \times \frac{1}{4}''$.

C. 121. 006. (2 miles N. of.) **Pottery fr.**, hand-made; cf. C. 121. 001–4. Fired on an open hearth. $1\frac{1}{2}'' \times \frac{7}{8}'' \times \frac{3}{16}''$.

C. 121. 007–008. (2 miles N. of.) **Two pottery frs.**, hand-made, of ill-levigated clay, hard-fired on an open hearth, sand-worn; from same vessel. Gr. fr. $4\frac{1}{2}'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$ to $\frac{1}{16}''$.

C. 121. 009. (6 miles N. of.) **Pottery fr.** from lip and neck of hand-made vessel; ill-levigated clay hard-fired on an open hearth. Lip bent much outwards but has sq. edge. Orig. diam. at lip *c.* $5\frac{1}{2}''$; h. $1\frac{3}{4}''$; length $2\frac{1}{2}''$; thickness $\frac{1}{4}''$.

C. 121. 0010. Jasper flake, speckled brown, irregularly flaked on the faces with one patch of pebbled surface. Found 15. xii. 06. See R. A. Smith in *Man*, xi. 6. No. 52. Length $2\frac{1}{2}''$. Pl. XXX.

C. 121. 0011. (N. of.) **Jasper flake**, speckled brown, with bulb of percussion on plain face, the other pebbled and chipped. Found 15. xii. 06. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{3}{10}''$. Pl. XXX.

C. 121. 0012. (N. of.) **Quartz flake**, salmon-coloured, curved; one face pebbled, the other plain. Found 15. xii. 06. Length $1\frac{1}{4}''$.

C. 121. 0013. (N. of.) **Jasper flake**, dark grey, irregular shape, with sharp edges. Found 15. xii. 06. Length $1\frac{1}{5}''$.

C. 121. 0014. (N. of.) **Jasper lump**, dark grey, one flat face, irregularly flaked. Found 15. xii. 06. Length $\frac{9}{10}''$.

C. 121. 0015. (N. of.) **Jasper flake**, black with brown bands; bulb on one face, the other roughly flaked, and slightly sand-worn. Found 15. xii. 06. Length $1\frac{1}{2}''$.

C. 121. 0016. (N. of.) **Jasper flake**, dark grey, with one pebbled face, slightly sand-worn. Found 15. xii. 06. Length $1\frac{1}{10}''$.

C. 121. 0017. (N. of.) **Jasper core (?)**, dark grey, irregularly faceted. Found 15. xii. 06. Length $1\frac{1}{10}''$.

C. 121. 0018. (N. of.) **Jasper flake**, dark grey, subtriangular, both faces irregularly flaked. Found 15. xii. 06. Length $\frac{9}{10}''$.

C. 121. 0019. (N. of.) **Jasper flake**, black, roughly triangular, bulb of percussion on one face. Found 15. xii. 06 Length $\frac{9}{10}''$.

C. 121. 0020. (N. of.) **Jasper lump**, dark grey, triangular with two sand-worn faces. Found 15. xii. 06. Length $\frac{4}{5}''$.

C. 121. 0021. (N. of.) **Jasper flake**, brownish-grey, thin, flat faces, slightly sand-worn. Found 15. xii. 06. Length $1\frac{1}{10}''$.

C. 121. 0022. (N. of.) **Jasper flake**, black, thin; bulb on one face, the other ribbed. Found 15. xii. 06. Length $\frac{3}{4}''$.

C. 121. 0023. (N. of.) **Jasper blade**, grey, thin; one face ribbed, one edge perhaps worked. Found 15. xii. 06. Length $\frac{5}{8}''$.

C. 121. 0024. (N. of.) **Limestone pebble**, black, flat faces roughly oval. Found 15. xii. 06. Length $\frac{7}{10}''$.

C. 121. 0025. (N. of.) **Lump of volcanic stone** (slag), black, pitted in places, slightly sand-worn. Found 15. xii. 06. Length 1″.

C. 121. 0026. (N. of.) **Lump of volcanic stone** (slag), grey-black, with air-holes. Found 15. xii. 06. Length $1\frac{3}{4}''$.

C. 121. 0027. (N. of.) **Lump of serpentine**, black, irregular and pitted surface, wind-worn. Found 15. xii. 06. Length 1″.

C. 121. 0028. Jasper blade, black, curved; bulb on plain face, divided rib on other face; edges slightly worked. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{1}{2}''$. Pl. XXX.

C. 121. 0029. Jasper blade, bright yellow, bulb on one face, double rib on the other, edges slightly worked. Length 1″.

C. 121. 0030. Jasper blade, dark yellow; ribbed on one face, one edge slightly worked. Length $\frac{9}{10}''$.

C. 121. 0031. Jasper blade, black; bulb on one face, the other ribbed. Length $1\frac{2}{5}''$.

C. 121. 0032. Jasper blade, greyish brown, with two ridges on one face, both edges worked. See R. A. Smith in *Man*, xi. 6. No. 52. Length 2″. Pl. XXX.

C. 121. 0033. Jasper blade, dark dove colour; bulb on one face, the other with central rib, both edges worked. See R. A. Smith in *Man*, xi. 6. No. 52. Length $2\frac{3}{10}''$. Pl. XXX.

C. 121. 0034. Jasper flake, chocolate colour; bulb on one face, the other flaked, and notched by use. Length 1″.

C. 121. 0035. Jasper blade, speckled brown, one face ribbed, both edges worked. Length $1\frac{3}{10}''$.

C. 121. 0036. Jasper blade, dark olive green, of triangular section; bulb on one face, the other worn by sand; both edges worked. Length 2″.

C. 121. 0037. Jasper blade, yellow; bulb on one face, irregular central rib on the other. Length $1\frac{3}{5}$″.

C. 121. 0038. (3–6 miles N. of.) **Jasper nodule,** dull yellow, irregular bar form, rectang. section, sand-worn. Length 3″.

C. 121. 0039. (3–6 miles N. of.) **Slate splinter,** grey, rectang. section, pointed but unworked. Length $3\frac{7}{10}$″.

C. 121. 0040. (3–6 miles N. of.) **Slate splinter,** greenish grey, of knife form but unworked. Length $3\frac{1}{2}$″.

C. 121. 0041. (3–6 miles N. of.) **Slate splinter,** greenish grey, sq. section, but unworked. Length $2\frac{1}{2}$″.

C. 121. 0042. (3–6 miles N. of.) **Slate splinter,** grey, thick and cutting edges, but unworked. Length $\frac{7}{10}$″.

C. 121. 0043. (3–6 miles N. of.) **Jasper blade,** dark grey, one face ribbed, and one edge perhaps worked. Length $\frac{7}{10}$″.

C. 121. 0044. (3–6 miles N. of.) **Jasper blade,** dark grey; bulb on plain face, the other ribbed, and edges worked. Length 1″.

C. 121. 0045. (3–6 miles N. of.) **Chert blade,** purplish brown, curved; bulb on one face, the other with central rib; both edges worked. See R. A. Smith in *Man*, xi. 6. No. 52. Length $2\frac{4}{5}$″. Pl. XXX.

C. 121. 0046. (3–6 miles N. of.) **Jasper flake,** black; bulb on plain face, the other flaked. Length $\frac{3}{5}$″.

C. 121. 0047. (3–6 miles N. of.) **Cornelian flake,** pale Indian red; bulb on one face, flaked on the other, which has a patch of buff crust. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{9}{10}$″. Pl. XXX.

C. 121. 0048. (N. of.) **Jasper flake,** purplish grey, subtriangular; one face plain, the other flaked; slightly sand-worn. Found 15. xii. 06. Length $2\frac{1}{10}$″.

C. 121. 0049. (N. of.) **Jasper flake,** dark green with bands, bulb on plain face, the other with one jagged edge and blunted point perhaps used for boring. Found 15. xii. 06. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{4}{5}$″. Pl. XXX.

C. 121. 0050. (N. of.) **Bronze arrowhead,** as C. 123. 001, q. v. Pierced for tang. Length $1\frac{1}{16}$″.

C. 121–122. 001. Sandy slate slab, purplish grey, with natural faces and vertical untrimmed edges showing the laminated structure. Length $2\frac{3}{4}$″.

C. 121–122. 002. Jasper core, speckled brown; one side with regular facets, the other rising to central point. Found 15. xii. 06. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{1}{4}$″. Pl. XXX.

C. 121–122. 003. Jasper lump, dark grey, angular, with one smooth face, perhaps a core; chipped. Found 15. xii. 06. Length $1\frac{1}{5}$″.

C. 121–122. 004. Lump of banded jasper, dark olive green with yellow veins harder than the mass; the whole sand-polished. Found 15. xii. 06. Length 3″.

C. 121–122. 005. Lump of volcanic stone (slag?), black, with numerous air-holes and slight sand-polishing. Found 15. xii. 06. Length $1\frac{4}{5}$″.

C. 121–122. 006. Lump of volcanic stone (slag?), black, yellowish surface, with numerous air-holes. Found 15. xii. 06. Length $1\frac{1}{10}$″.

C. 121–122. 007. Lump of volcanic stone (slag?), black, yellowish surface, with numerous air-holes. Found 15. xii. 06. Length 1″.

C. 122. 001. a. (3 miles N. of.) **Pottery fr.** from wide-mouthed vase, hand-made, of ill-levigated clay; lip with sq. edge slightly bent out. Below, three horizontal rows of incised herring-bone pattern. Outer surface blackened. Thin and evenly-fired, perhaps intentionally 'smothered'. $4\frac{1}{2}$″ × $3\frac{1}{2}$″ × $\frac{3}{16}$″. Pl. IV.

C. 122. 002. (S. of.) **Jasper core,** marbled grey and yellow; one face plain, the other with parallel grooves from flaking. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{2}{5}$″. Pl. XXX.

C. 122. 002. a. (5–6 miles N. of.) **Pottery fr.** from wall of vase (two pieces joining), hand-made, of ill-levigated clay, fired on an open hearth. Found 16. xii. 06. Gr. M. 4″; thickness $\frac{1}{8}$″ to $\frac{1}{4}$″.

C. 122. 003. (S. of.) **Jasper blade,** brown; bulb on plain face, ribbed on the other; both edges slightly worked. Length $1\frac{3}{10}$″.

C. 122. 003. a. (5–6 miles N. of.) **Pottery fr.** from large vessel, hand-made, of ill-levigated clay, hard-fired on an open hearth. Found 16. xii. 06. Gr. M. $2\frac{3}{4}$″; thickness $\frac{1}{2}$″.

C. 122. 004. (S. of.) **Jasper blade,** olive green, with central rib, one edge worked. Length $1\frac{1}{10}$″.

C. 122. 004. a. (9 miles N. of.) **Pottery fr.,** hand-made, of ill-levigated clay, fired on an open hearth; sand-worn. Found 16. xii. 06. Gr. M. 2″; thickness $\frac{1}{4}$″.

C. 122. 005. (S. of.) **Jasper blade,** olive green; bulb on plain face, two ribs on the other; both edges worked. Length $1\frac{1}{2}$″.

C. 122. 005. a. (9 miles N. of.) **Pottery fr.** from neck of vase, hand-made, of ill-levigated clay; hard-fired red clay, surface, especially on outside, superficially blackened. Apparently fired in smother-kiln. Everted rim with sq. edge. Found 16. xii. 06. Orig. diam. at rim *c.* 7″; gr. m. $3\frac{1}{4}$″; thickness $\frac{5}{16}$″ to $\frac{1}{4}$″.

C. 122. 006. (S. of.) **Jasper blade,** dark purplish grey, with bulb on plain face, the other with central rib; one edge more worked than the other. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{4}{5}$″. Pl. XXX.

C. 122. 006. a. (5–6 miles N. of.) **Jasper core,** brown, slightly tapering, facets irregular but continuous. Found 16. xii. 06. See R. A. Smith in *Man*, xi. 6. No. 52. Length 1″. Pl. XXX.

C. 122. 007. (S. of.) **Jasper blade,** dark grey, with bulb on plain face, and double rib on the other; one edge jagged from use, the other slightly worked. Length $1\frac{3}{5}''$.

C. 122. 007. a. (5–6 miles N. of.) **Pottery fr.** from same vessel as C. 122. 003. a. Found 16. xii. 06. Gr. M. $1\frac{1}{2}''$.

C. 122. 008. (S. of.) **Jasper blade,** speckled brown, with double rib on one face and both edges worked. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{1}{10}''$. Pl. XXX.

C. 122. 008. a. (5–6 miles N. of.) **Pottery fr.,** hand-made, of peculiarly ill-levigated clay, fired on an open hearth. Found 16. xii. 06. $\frac{3}{4}'' \times 1'' \times \frac{3}{16}''$.

C. 122. 009. (S. of.) **Jasper flake,** mottled brown, thin, plain face with bulb of percussion; one steep edge as though used for scraping. Length $\frac{3}{4}''$.

C. 122. 009. a. (5–6 miles N. of.) **Pottery fr.,** hand-made, of ill-levigated clay, hard-fired on an open hearth. Found 16. xii. 06. Gr. M. $1\frac{1}{2}''$; thickness $\frac{1}{2}''$ to $\frac{3}{8}''$.

C. 122. 0010. (S. of.) **Jasper flake,** dark brown, orig. smoothed surface opposite cutting edge, which is jagged and unused; bulb of percussion on plain face, and the whole sand-worn. Length $\frac{9}{10}''$.

C. 122. 0010. a. (5–6 miles N. of.) **Jasper blade,** chocolate colour, one face ribbed and sand-polished; one edge worked, but mainly on the bulb face. Found 16. xii. 06. Length $1\frac{1}{2}''$.

C. 122. 0011. (S. of.) **Black slate flake,** with white quartz veins, all but one side worn smooth by sand; no bulb of percussion or chipping. Length $\frac{4}{5}''$.

C. 122. 0011. a. (5–6 miles N. of.) **Jasper blade,** chocolate colour; bulb on plain face, the other with two ribs; both edges worked, but mainly on the bulb face. Found 16. xii. 06. Length $1\frac{1}{4}''$.

C. 122. 0012. (S. of.) **Chert flake,** brown, one face with bulb of percussion; the edges jagged and unworked. Length $1\frac{7}{10}''$.

C. 122. 0012. a. (5–6 miles N. of.) **Jasper blade,** dark purple, double rib on one face; both edges worked on the bulb face. Found 16. xii. 06. Length $\frac{4}{5}''$.

C. 122. 0013. (5–6 miles N. of.) **Jasper blade,** dark purple, central rib on one face; one edge worked on the bulb face. Found 16. xii. 06. Length $1\frac{1}{10}''$.

C. 122. 0014. (5–6 miles N. of.) **Jasper blade,** chocolate colour, central rib on one face; both edges much worked, but chipped only on the bulb face. Found 16. xii. 06. Length $1\frac{2}{5}''$.

C. 122. 0015. (5–6 miles N. of.) **Jasper blade,** chocolate colour; bulb on plain face, the other with two ribs; one edge worked, but only on the bulb face. Found 16. xii. 06. Length $\frac{9}{10}''$.

C. 122. 0016. (5–6 miles N. of.) **Jasper blade,** dark purple; bulb on plain face, the other ribbed longitudinally. Found 16. xii. 06. Length $\frac{9}{10}''$.

C. 122. 0017. (5–6 miles N. of.) **Jasper blade,** dull purple, bulb on plain face, the other with two ribs; edges unworked. Found 16. xii. 06. Length $\frac{9}{10}''$.

C. 122. 0018. (5–6 miles N. of.) **Jasper blade,** dark purple; bulb on one face, the other with central rib; both edges worked, but only on the bulb face. Found 16. xii. 06. Length $\frac{4}{5}''$.

C. 122. 0019. (5–6 miles N. of.) **Jasper flake,** purplish brown, with patches of orig. sand-worn surface flanking the point; edges smooth and unused. Found 16. xii. 06. Length $1\frac{3}{10}''$.

C. 122. 0020. (5–6 miles N. of.) **Fr. of jasper flake,** chocolate colour. Found 16. xii. 06. Gr. M. $1\frac{1}{8}''$.

C. 122. 0021. (9 miles N. of.) **Bronze ring.** Flat oval bezel with intaglio design, apparently two long-necked gryphons, one above the other, running L. Part of hoop corroded; elsewhere sand-worn. Found 16. xii. 06. Diam. $\frac{3}{4}''$; bezel $\frac{3}{4}'' \times \frac{5}{8}''$.

C. 122. 0022. (5–6 miles N of.) **Jasper blade,** dark yellowish grey; bulb on plain face, central rib on the other; both edges worked. Found 16. xii. 06. Length $1\frac{3}{5}''$.

C. 122. 0023. (6 miles N. of.) **Jasper arrowhead,** dark grey, triangular, neatly flaked all over. Found 16. xii. 06. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{1}{5}''$. Pl. XXX.

C. 122. 0024. (5–6 miles N. of.) **Jasper blade,** black; bulb on one face, double rib on the other; both edges much chipped, only on the bulb face. Found 16. xii. 06. Length $1\frac{2}{5}''$.

C. 122. 0025. (5–6 miles N. of.) **Jasper blade,** purplish black, rib on one side; both edges worked, but mainly on the bulb face. Found 16. xii. 06. Length $\frac{9}{10}''$.

C. 122. 0026. (5–6 miles N. of.) **Jasper blade,** Bath-stone colour, central rib, one edge worked. Found 16. xii. 06. Length $\frac{7}{10}''$.

C. 122. 0027. (5–6 miles N. of.) **Jasper blade,** speckled brown, with bulb on one face and central rib on the other; both edges worked. Found 16. xii. 06. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{3}{5}''$. Pl. XXX.

C. 122. 0028. (5–6 miles N. of.) **Jasper flake,** olive green, thin; bulb on one face, ribbed on the other; sharp edges. Found 16. xii. 06. Length $1\frac{1}{10}''$.

C. 122. 0029. (5–6 miles N. of.) **Jasper flake,** olive green; bulb on one face, the other with two irregular

ribs; edges unworked; rather sand-worn. Found 16. xii. 06. Length $\frac{4}{5}$″.

C. 122. 0030. (5–6 miles N. of.) **Jasper blade,** olive green; bulb on plain face, the other with central rib and sand-worn; edges unused. Found 16. xii. 06. Length $1\frac{9}{10}$″.

C. 122. 0031. (5–6 miles N. of.) **Jasper blade,** olive green; bulb on one face, two ribs on the other. Found 16. xii. 06. Length $\frac{4}{5}$″.

C. 122. 0032. (5–6 miles N. of.) **Jasper blade,** dark purple; slight bulb on plain face, and double rib on the other; one edge slightly worked on the bulb face. Found 16. xii. 06. Length $\frac{9}{10}$″.

C. 122. 0033. (5–6 miles N. of.) **Jasper blade,** black, central rib on one face; one edge very slightly worked. Found 16. xii. 06. Length $1\frac{3}{5}$″.

C. 122. 0034. (5–6 miles N. of.) **Jasper blade,** purplish black; bulb on plain face, double rib on the other; tapering. Found 16. xii. 06. Length $1\frac{1}{10}$″.

C. 122. 0035. (5–6 miles N. of.) **Jasper flake,** black, with sharp unworn edges; bulb of percussion on one face and median ridge on the other. Found 16. xii. 06. Length $\frac{9}{10}$″.

C. 122. 0036. (5–6 miles N. of.) **Jasper flake,** black, circular edge. One face polished and scratched, the other slightly sand-worn. Found 16. xii. 06. Length $\frac{4}{5}$″.

C. 122. 0037. (5–6 miles N. of.) **Jasper flake,** black, sub-triangular; one face convex and flaked all over, the other plain with bulb of percussion; edges jagged and battered. Found 16. xii. 06. Length $\frac{9}{10}$″.

C. 122. 0038. (5–6 miles N. of.) **Jasper flake,** olive green; bulb of percussion on one face, and two thick edges showing original sand-polished surface, with harder bands. Found 16. xii. 06. Length $1\frac{1}{10}$″.

C. 122. 0039. (5–6 miles N. of.) **Chert flake,** dove-colour, sub-triangular; one face smoothed by sand, the other bearing bulb of percussion. Found 16. xii. 06. Length $\frac{7}{10}$″.

C. 122. 0040. (5–6 miles N. of.) **Jasper flake,** dove-colour, one face plain with bulb of percussion. Found 16. xii. 06. Length $\frac{7}{10}$″.

C. 122. 0041. (5–6 miles N. of.) **Jasper flake,** olive green; one face sand-worn showing harder bands, the other with bulb of percussion. Lower edge straight, very slightly chipped; the others intact. Found 16. xii. 06. Length 1″.

C. 122. 0042. (5–6 miles N. of.) **Quartz flake,** yellow; one pebbled face, the other with bulb of percussion; edges rough and unused. Found 16. xii. 06. Length $\frac{9}{10}$″.

C. 122. 0043. (5–6 miles N. of.) **Quartz flake,** pale yellow, unshaped, with ill-defined bulb of percussion on one face, and long edge worn thick by use as scraper. Found 16. xii. 06. Length $\frac{9}{10}$″.

C. 122. 0044. (5–6 miles N. of.) **Quartz flake,** pale yellow; one thick edge with orig. smoothed surface, the rest rough, unshaped and edges intact. Found 16. xii. 06. Length $\frac{9}{10}$″.

C. 122. 0045. (5–6 miles N. of.) **Quartz flake,** pale yellow, unshaped, one face pebbled. Found 16. xii. 06. Length 1″.

C. 122. 0046. (5–6 miles N. of.) **Quartz flake,** yellow; one face with orig. pebbled surface, the other with bulb of percussion; edges even but unused. Found 16. xii. 06. Length $1\frac{1}{4}$″.

C. 122. 0047. (5–6 miles N. of.) **Jasper blade,** dark grey, rib to one side, worn; one edge slightly worked Found 16. xii. 06. Length 1″.

C. 122. 0048. (9 miles N. of.) **Jasper flake,** dove-colour, with bulb of percussion and one thick straight edge; weathered, unshaped and unused. Found 16. xii. 06. Length $1\frac{7}{10}$″.

C. 122. 0049. (9 miles N. of.) **Jasper flake,** mottled yellow and black, from a sand-worn pebble; both edges jagged, one being slightly used. Found 16. xii. 06. See R. A. Smith in *Man*, xi. 6. No. 52. Length $2\frac{3}{5}$″. Pl. XXX.

C. 122. 0050. (9 miles N. of.) **Jasper flake,** olive green; one face pebbled, the other with ridge and curved edges; perhaps used as a knife. Found 16. xii. 06. Length $3\frac{7}{10}$″.

C. 122. 0051. (N. of.) **Limestone,** dull yellow, rough and sand-worn, with branches broken and unworn fractures; natural perforation. Found 16. xii. 06. Length $1\frac{2}{5}$″.

C. 122. 0052. (9 miles N. of.) **Jasper blade,** black, with bulb of percussion on one face and two ribs on the other; both edges worked. Found 16. xii. 06. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{7}{10}$″. Pl. XXX.

C. 122. 0054. Black jasper leaf-shaped point (arrow-head ?), symmetrical and finely worked on both faces and edges, thickest along middle; sand-worn. See R. A. Smith in *Man*, xi. 6. No. 52. Length $2\frac{1}{5}$″. Pl. XXX.

C. 122–123. 001. Jasper flake, brown, with long back, and long edge slightly worked. Length $1\frac{2}{5}$″.

C. 122–123. 002. Jasper flake, brown speckled; one plain flat face, the other with three edges very slightly worked. Length $1\frac{3}{10}$″.

C. 122–123. 003. Jasper flake, dark bluish-grey, from a pebble, unshaped and unworked. Length $\frac{4}{5}$″.

C. 122–123. 004. Quartz flake, thin, banded dark grey, translucent in parts; one face pebbled, the other plain with bulb of percussion. Length $1\frac{1}{4}$″.

C. 122–123. 005. Jasper flake, slatey grey; bulb of percussion on one face, the other flaked; the long edge smooth, the end jagged; slightly sand-worn. Length 1″.

C. 122–123. 006. Jasper flake, purplish grey, from a pebble, unshaped. Length $\frac{7}{10}$″.

C. 122–123. 007. Jade flake, one face worn smooth, unshaped and unworked. Length $1\frac{3}{10}$″.

C. 122–123. 008. Jasper flake, purplish grey, triangular, broken across the base, the two edges sand-worn. Length $\frac{9}{10}$″.

C. 122–123 009. Jasper blade, brown, with central rib, one edge worked. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{3}{5}$″. Pl. XXX.

C. 122–123. 0010. Jasper blade, purplish brown, with double longitudinal rib; one edge regularly worked, the other chipped on both faces. Length $\frac{4}{5}$″.

C. 122–123. 0011. Jasper blade, black, with central rib; one edge regularly worked to form a back, the other chipped on both faces. Length $1\frac{1}{10}$″.

C. 122–123. 0012. Jasper blade, purple, with central rib; one edge slightly worked. Length $\frac{3}{4}$″.

C. 122–123. 0013. Jasper blade, slaty-grey; with central rib; one edge notched. Length $\frac{4}{5}$″.

C. 122–123. 0014. Jasper blade, slaty-grey; doubly ridged; one edge slightly worked. Length 1″.

C. 122–123. 0015. Slag lump, black and pitted, slightly sand-worn. Length $\frac{7}{10}$″.

C. 123. 001. (N. of.) **Bronze arrowhead;** triangular in section to point; hexagonal at shaft end, flanges being bevelled down; solid. Cf. *Ancient Khotan*, ii. Pl. LXXIV. N. 005. a. Found 17. xii. 06. Length $1\frac{1}{8}$″.

C. 123. 002. (N. of.) **Bronze arrowhead,** as C. 123. 001, but pierced to attach tang. Found 17. xii. 06. Length 1″.

C. 123. 003. (N. of.) **Bronze arrowhead,** as C. 123. 001, but with short (broken) tang of iron inserted. Found 17. xii. 06. Length $1\frac{9}{16}$″.

C. 123. 004. (N. of.) **Point of iron nail (?),** sq. in section. Found 17. xii. 06. Length $1\frac{3}{16}$″; gr. diam. $\frac{1}{8}$″.

C. 123. 005. (N. of.) **Irregular strip of plate bronze,** slightly curved, prob. from edge of mirror. Found 17. xii. 06. $\frac{7}{8}$″ × $\frac{1}{2}$″ × $\frac{3}{32}$″.

C. 125. a. (4 miles SW. of.) **Pottery fr.** from hand-made vessel of ill-levigated clay, fired on open hearth; vertical ring handle. Found 29. xii. 06. $3\frac{1}{2}$″ × $3\frac{1}{2}$″ × $\frac{1}{4}$″. Pl. IV.

C. 125. b. Pottery fr., hand-made, of ill-levigated clay, fired on open hearth; sand-worn. $2\frac{1}{4}$″ × $1\frac{3}{4}$″ × $\frac{3}{16}$″.

C. 125. 001. (6 miles SW. of.) **Bronze spear-head,** shaft end broken; narrow leaf-shaped blade with central rib; hollow-socketed; clumsily made. Found 29. xii. 06. $2\frac{1}{16}$″ × $\frac{7}{8}$″.

C. 125–126. 001. Pottery fr., hand-made, of ill-levigated clay, hard-fired, black. $1\frac{3}{8}$″ × $\frac{7}{8}$″ × *c.* $\frac{1}{4}$″.

C. 125–128. 001. Iron key. Shaft, oblong in section, thickened and pierced at handle end to form narrow loop; at other end bent at right angles, and again at right angles in orig. direction, to form ward. Four teeth remain, three projecting at right angles from edge of bent portion, one from edge of shaft above first bend; traces of fifth still higher up edge of shaft. For similar key, see Strzygowski, *Koptische Kunst*, Taf. xxxvi, No. 9197. $3\frac{3}{4}$″ × $\frac{5}{16}$″ × $\frac{1}{8}$″; teeth $\frac{1}{2}$″ × $\frac{3}{16}$″ × $\frac{1}{16}$″.

C. 125–129. a. Pottery fr. from upper part of open rimless hand-made vessel. Edge simply rounded and orn. with impressed row of chain pattern; same orn. occurs on band slightly lower down. Ill-levigated clay loose in texture, badly potted, and fired on open hearth. $1\frac{5}{8}$″ × $1\frac{1}{2}$″ × *c.* $\frac{3}{16}$″. Pl. IV.

C. 125–129. b–c. Pottery frs., coarse hand-made ware as C. 125–129. a.; *q.v.* Gr. M. $1\frac{1}{2}$″.

C. 125–129. d. Oval mass of clay, half of, pierced lengthways; same clay and technique as C. 125–129. a–c. $1\frac{9}{16}$″ × $1\frac{1}{16}$″ × $\frac{5}{8}$″ max.

C. 125–129. e. Irregular chip of bronze, perhaps part of knife-blade; cf. C. 126. 004. Gr. M. $\frac{9}{16}$″.

C. 126. 001. Jade celt, the faces smooth and sides left rough, except at side of cutting edge. See R. A. Smith in *Man*, xi. 6. No. 52. Length 4″. Pl. XXX.

C. 126. 002. (9 miles SW. of.) **Fr. of bronze mirror.** On back, raised edge bevelled each side; then row of relief rays and row of relief radiating lines. Traces of relief pattern of curves in centre, Chinese style. Cf. L. A. 0027. Length 2″; thickness $\frac{1}{8}$″ to $\frac{1}{16}$″; orig. diam. *c.* $3\frac{1}{2}$″.

C. 126. 003. Fr. of bronze mirror. On back, part of sunk pattern of curves; bevelled edge. Cf. C. 126. 002 and L.A. 0027. Found 30. xii. 06. $1\frac{1}{8}$″ × $\frac{3}{4}$″ × $\frac{1}{12}$″; orig. diam. *c.* $4\frac{1}{2}$″.

C. 126. 004. Fr. of bronze knife(?)-blade, with one sharp edge. Found 30. xii. 06. $1\frac{1}{4}$″ × $\frac{9}{16}$″ × $\frac{1}{8}$″.

C. 127–128. a. Pottery fr., hand-made, of ill-levigated clay, fired on open hearth; inside face green-grey, outside red orn. with applied strip of clay indented by finger. $2\frac{15}{16}$″ × $1\frac{1}{2}$″ × $\frac{1}{4}$″.

C. 127–128. b. Pottery fr., hand-made, ill-levigated, fired on open hearth. $1\frac{15}{16}$″ × $1\frac{3}{4}$″ × $\frac{1}{4}$″.

C. 127–128. c. Pottery fr., hand-made, of ill-levigated clay, hard-fired on open hearth; sand-worn. $1\frac{7}{16}$″ × 1″ × $\frac{1}{4}$″.

C. 127–128. d. Pottery fr., worn by sand-drift. $\frac{7}{8}$″ × $\frac{3}{4}$″ × $\frac{3}{16}$″.

C. 127–128. 001. Jasper lump, purplish brown, four-sided, tapering to point, the whole sand-worn. Length $2\frac{3}{5}$″.

C. 127–128. 002. **Chalcedony blade,** black; bulb on plain face, the other with central rib. See R. A. Smith in *Man*, xi. 6. No. 52. Length $1\frac{9}{10}$". Pl. XXX.

C. 127–128. 003. **Jasper blade,** black; bulb on plain face, the other with double central rib; one edge worked. See R. A. Smith in *Man*, xi. 6. No. 52. Length $2\frac{1}{8}$". Pl. XXX.

C. 127–128. 004. **Serpentine (Bowenite) bead,** milky, translucent; round perforation and pointed oval section; surfaces smoothed. Length $\frac{4}{5}$".

C. 127–128. 005. **Ball of wood** (?) with projecting point; decaying. Diam. $\frac{5}{8}$".

C. 127–128. 006. **Snail-shells** (?) from C. 127.

C. 128. 001. (S.W. of.) **Fr. of bronze spear-point;** long leaf-shaped blade with solid tang and central rib. Found 1. i. 07. $2\frac{1}{2}" \times \frac{3}{4}" \times \frac{3}{16}"$ to $\frac{1}{16}"$.

CHAPTER XI

THE LOU-LAN SITE

Section I.—EXCAVATION OF RUINED DWELLING, L.A. i.

In the early morning of December 18 my first task was to dispatch my transport according to a previously settled plan. The main convoy of camels was sent off, under Tokhta Ākhūn's guidance, to a salt-spring at the foot of the Kuruk-tāgh north-westwards which he had discovered the year before, when accompanying Professor Huntington on his plucky expedition to Āltmish-bulak, across the salt-encrusted old lake-bed, and which he appropriately called *Yangi-bulak*, 'the New Spring'. There the camels were to get a rest and much-needed grazing while we were at our excavation labours. Five camels were to return to our half-way depot at Camp 121 and to fetch the supplies left there and such fresh ice as had been brought up by the auxiliary donkey column. Rai Rām Singh, provided with some camels, was to make a short surveying reconnaissance to the north-west and to ascertain the exact positions of the ruins which Dr. Hedin's popular narrative mentioned in that direction, but which the small-scale sketch-map attached to it did not show. Disposal of transport.

Left to the undisturbed solitude of the site, I set out for a rapid survey of its ruins. Looking round from the high base of the Stūpa below which my tent had been pitched, I had before me vistas which seemed strangely familiar and at the same time strikingly novel (Figs. 92, 93). To the south and south-west there rose in small clusters ruins of timber and plaster-built houses. These, with their bleached and splintered posts and the steep, débris-strewn slopes of the wind-eroded terraces on which they stood, curiously recalled well-remembered ruins at the Niya Site, though here the winds had generally left far less cover of protecting sand. First survey of ruins.

But I was far more impressed by the difference in the setting. Around the scattered ruins of the Niya Site and their silent scenes of destruction the eye had found relief in the soft-lined expanse of swelling dunes and sand-cones which recalled the open sea. Here there was nothing for the eye to rest on but an endless succession of sharply-cut Yārdangs of hard clay and deep-scoured trenches, all running in the same direction, just as that relentless north-east wind had sculptured them. It was, too, strangely like a picture of the sea, but of one frozen hard and buckled into innumerable pressure ridges. The view from the Stūpa ranged freely over many miles of this dismal ground. But, apart from the ruins near, my powerful glasses showed no structural remains excepting a few scattered mounds, manifestly brick-built and badly decayed, in the distance to the north and north-west. It seemed strange that any structures at all, built of mere timber and wattle, should have survived the effects of such frightful erosion. But I did not stop at the time to think about the special reason which had saved them in the vicinity of the Stūpa. Wind-eroded landscape.

Just as the ruins themselves, so the work to which I settled down at them combined both familiar and novel aspects. I knew beforehand that remains to be brought to light here dated approximately from the same period as those of the Niya Site, i.e. from about the third century A.D. The clearing the ruined structures of the sand and the hoped-for refuse accumulated within them, the careful search of the débris strewing the eroded slopes below, and so forth, were tasks to which not only myself but Naik Rām Singh and my faithful factotum Ibrāhīm Beg were fully Dr. Hedin's exploration of site.

accustomed. But there was for me this novel feature in the work that the wonted operations were to be conducted at a site which had already been searched, at least partially, by an earlier European explorer. Dr. Hedin's popular narrative of his journey of 1899–1901 had, by its chapters on 'The ruins of ancient Lop-nor' and 'Lôu-lan', and particularly by the excellent illustrations accompanying them, familiarized me with the general features of the ruins which a lucky chance had led him to discover in March, 1900, on his first crossing of the desert from Āltmish-bulak, and with the remains which a second visit, paid specially for this purpose, had allowed him to bring to light in March, 1901.[1] He had made important discoveries, and though they had not yet received full expert analysis, the antiquarian evidence which they yielded was in many respects assured beyond doubt. But it was obvious that a thorough exploration of the site, or even of a portion of it, had remained beyond the range of the operations of its first discoverer. Dr. Hedin, out of a total stay of six days on his second visit, had been able to give only three to actual excavation at the eastern group of ruins, and a fourth at the western. He had the services of only five men besides himself, and not one in the whole party had previous experience of, or special training for, such work, while the ruins to be searched were numerous and widely scattered. The need of a systematic archaeological exploration of the site was thus clearly established from the first. But there remained the question how much the site thus 'researched' would still furnish in new facts, observations, and finds.

The hope which my first rapid inspection of the eastern group of ruins (designated thereafter as L.A.) had raised was fully justified by the results of the work carried on here without intermission between December 18 and 23. In describing them, I propose to follow the chronological order in which the various structures were searched by us, and to add what observations I have to make regarding the general character of the ancient Chinese station represented by the ruins of L.A. Most of these structures had been examined by Dr. Hedin, and a number of them searched by his men either under his supervision or without it.

Dr. Hedin's finds and observations.

In Chapters XLIV, XLV of his scientific publication, Dr. Hedin has given a description of 'the ruined houses of Lôu-lan' as he saw them, together with such measurements as he was able to take, and a number of very instructive photographs.[2] But as the survey and excavations carried out were affected by the limitations of time and labour already mentioned, as well as by other obvious drawbacks, I have not thought it necessary to discuss the details of his observations except where they contain evidence which was no longer obtainable on my visit. Nor have I felt it incumbent on me to examine the abundant inferences, except where they might claim special antiquarian or geographical interest and could be supported by critically admissible archaeological arguments. It has not been possible for me to compare in detail or otherwise utilize the valuable finds of MS. remains and other antiques brought back by Dr. Hedin from this site, as the special section of his large work in which the late Professor A. Conrady and Herr Himly were to have given the results of their examination of these materials has so far not been published.[3] In regard to them my information is restricted to the preliminary notes published by the last-named scholar in 1902,[4] and these are necessarily too brief and provisional in character to warrant detailed analysis here by the side of the abundant new materials which the site has since furnished.

Construction of ruin L.A. I.

Our operations were begun at the ruin L.A. I (see Plates 23, 24), which lay nearest to the

[1] See Hedin, *Central Asia and Tibet*, ii. pp. 111–50; also i. pp. 376–84.

[2] See Hedin, *Central Asia*, ii. pp. 621–648 with Plates 65–76.

[3] Cf. Hedin, *Central Asia*, ii. p. 621.

[4] See Himly, in *Petermann's Mittheilungen*, 1902, part xii, pp. 288–90.

Stūpa, and their results held out encouraging hopes from the start. At about 60 yards' distance to the south-south-east of the Stūpa the top of a terrace, rising with steep banks above the wind-eroded ground, bore what manifestly was but the remnant of a well-built house once much larger. As the photographs, Figs. 93, 94, clearly show, heavy timber débris covered the slopes of the terrace, particularly to the east and south, thus indicating the position of rooms which had completely disappeared through erosion of the underlying soil. On the south the deepest portion of the immediately adjoining ground lay fully 18 feet below the original surface level, as marked by the foundation beams still *in situ*. Other such beams are seen in Fig. 94, either fallen over the slopes or else overhanging them. Here, as at all other ruins of this site, these foundation beams, as well as all posts, etc., forming the timber framework of the walls, were invariably of wild poplar wood. In the ruin L.A. I the foundation beams were of remarkable solidity, showing a thickness of nearly one foot. Below them a layer of tamarisk fascines, as subsequently observed also under the walls of L.A. II and the two Stūpa ruins, served as a flooring. The constructive features of the walls resembled very closely those observed at the ruined dwellings of the Niya Site and also of Khādalik. Set in sockets in the foundation beams were rows of square posts, as seen in Fig. 93, the thicker ones meant to carry the roof beams and the smaller dividing the space between them at regular short intervals. To the latter were fastened horizontal bundles of reeds, which formed the wattle of the walls and were covered outside with mud plaster.[5] The walls in this, as in most other structures of L.A., were found to be carefully orientated with regard to the prevailing direction of the wind, one side of the rectangle always facing east-north-east.

Chinese records found at L.A. I.

In Plate 24 the ground-plan of the surviving portions of this house has been reproduced. To judge from the size of the large room, L.A. I. i, which measured 31 by 13 feet, and that adjoining it on the south-east, which though destroyed for the most part still retained a sitting platform of considerable width, the ruin might have been the residence of an official or some person of position. Though the drift-sand covering the floor of the extant rooms was nowhere more than two feet deep, and in most places even less, it had sufficed to protect a number of interesting relics which soon lent support to that conjecture. Three narrow slips of wood, L.A. I. i. 1; ii. 1; iii. 1 (Nos. 886–888 in Chavannes, *Documents*, Plate XXVII), about half an inch wide and each bearing one vertical line of Chinese characters on its obverse and reverse, I at once recognized as identical in shape, and probably also in character, with the Chinese official records on wood which my excavations of 1901 had first brought to light at the Niya Site.[6] The official nature of their contents is now proved by M. Chavannes' translation, which also has shown one of the slips, L.A. I. iii. 1, to be accurately dated in A.D. 330.[7] As this date, from a variety of reasons to be mentioned below, may be assumed to have been soon followed by the final abandonment of the site, it is highly probable that L.A. I continued to be occupied by some official till the end.

Discovery of Kharoṣṭhī documents.

The close resemblance in type and internal arrangement between this ruin and the ancient dwellings, so familiar to me at the Niya Site, made me feel at the time less surprise than I might have felt at the discovery immediately following of two oblong tablets in wood, L.A. I. ii. 1, 2, of which each bore four or five lines of faint but still legible writing in Kharoṣṭhī. Yet it was a most gratifying find, which thus at once gave assurance that the use of this ancient Indian script and language had extended so far away east, to the very end of the Tārīm Basin. When the miscellaneous rubbish which had found refuge under the fallen pieces of timber marking the position of an eroded apartment to the north-east (L.A. I. iv) came to be searched, there were

[5] Cf. Pl. 6 for a section of a timber and wattle wall at Khādalik similar in make.

[6] See *Ancient Khotan*, i. pp. 358 sqq., 537 sqq.; ii. Pl. CXII–CXIV.

[7] Cf. Chavannes, *Documents*, pp. 182 sqq.

added finds of three more Kharoṣṭhī documents, each presenting its own special point of interest. One, L.A. I. iv. 6, was a regular wedge covering-tablet, with seal cavity exactly reproducing the shape and arrangement of the wedge-shaped double tablets in wood which my finds at the Niya Site had proved to have been in use for semi-official correspondence, as it were.[8] Thus the elaborate indigenous system of ancient stationery was exactly the same in this far-off corner of the Tārīm Basin as in the Khotan region. Though the sand-abraded surface of the obverse no longer allowed the writing of the address which it must have once contained to be read, there could be little doubt about its having been intended for a representative of the indigenous administration and not for a Chinese official.

Toghrak wood used for documents.

The other record, L.A. I. iv. 5, consisted of a rough piece of tamarisk wood, still covered with bark on the back, and inscribed on the flat inside surface with two lines in Kharoṣṭhī. Its material looked strangely uncouth by comparison with the neatly finished and smooth tablets of the Niya Site, and this observation soon drew my attention to an essential difference in the make of this ancient stationery. On examining the other Kharoṣṭhī records on wood more closely (and this applies equally to the far more numerous ones subsequently recovered at this site), I found that their rough and cracked surface was not so much due to increased exposure and corrosion as to the wood being that of the Toghrak or wild poplar, with its naturally coarser fibre, instead of the Terek or cultivated poplar invariably used in the Kharoṣṭhī tablets of Niya. I shall have occasion to refer to this significant fact further on, when I discuss the limited resources of local cultivation at these Lop sites as shown also by the almost complete absence of dead tree trunks belonging to ancient arbours or orchards.[9]

Paper documents in Kharoṣṭhī, Chinese.

From the same refuse-strewn slope were recovered also the three fragments of a paper document, L.A. I. iv. 7, showing Kharoṣṭhī writing in a faint straggling hand. They, too, had an interest of their own as the first evidence I found of the use of paper at a period when the Kharoṣṭhī script and the Prākrit language associated with it in the Tārīm Basin were still current. That paper was, in this region and epoch, used simultaneously with wood for Chinese records also was made certain by the discovery of a number of fragmentary Chinese documents which were picked up from the rubbish of the wind-eroded slopes, L.A. I. v. 1 : *Doc.* Nos. 894, 895 ; L.A. I. iv. 2, 3 : *Doc.* Nos. 930–38, Plates XXIX–XXX.[10] The last-named were found glued together, card-board fashion, into small roughly semicircular packets which on one side bore remains of a thin coloured plaster coating. Whether these pieces of waste paper, proved by M. Chavannes' decipherment to contain portions of private letters, some offering a certain historical interest, had been used as a backing for a painted decoration or to fill some opening in a wall, as M. Chavannes thought, can no longer be determined. The fact of Kharoṣṭhī records at this ruin being nearly as numerous as Chinese contrasts strikingly with the great preponderance of the latter in the structure L.A. II, which certainly marks the local Chinese Ya-mên. It lends support to the suggestion that this dwelling L.A. I may have been occupied by a petty local head-man or representative of the indigenous administration of Lou-lan.

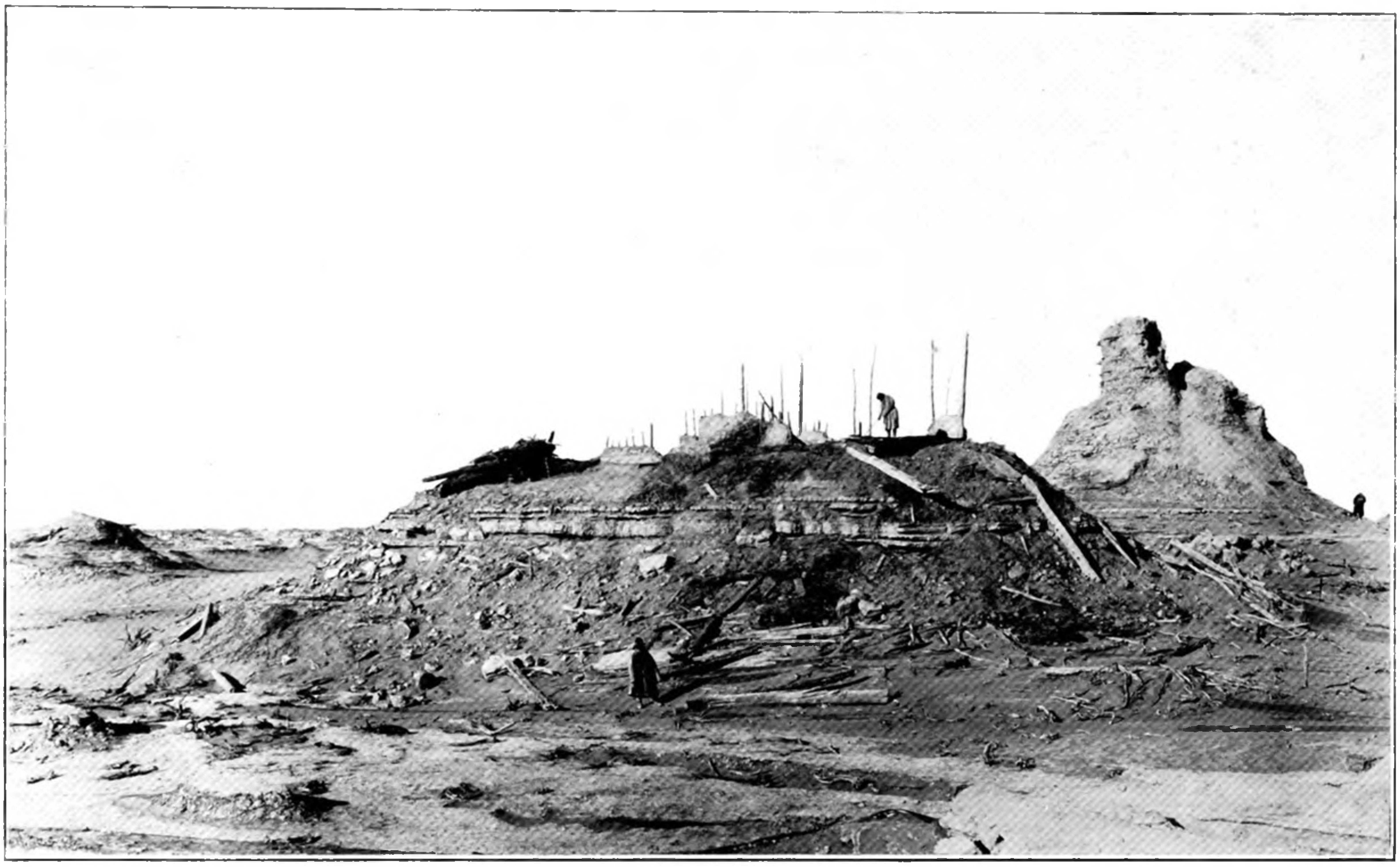
Find of pile carpet remains.

But in addition to these written records, the search of the first ruin explored was rewarded also by other relics of interest. In a corner of room ii there were found two fragments of a woollen pile carpet, L.A. I. ii. 001 (Plate XXXVII), much worn in most places but elsewhere still retaining its rich colours of deep claret, two browns, buff, light blue in remarkable brightness. It was the first ancient specimen of an industry attested in the Khotan region from very early times, and surviving

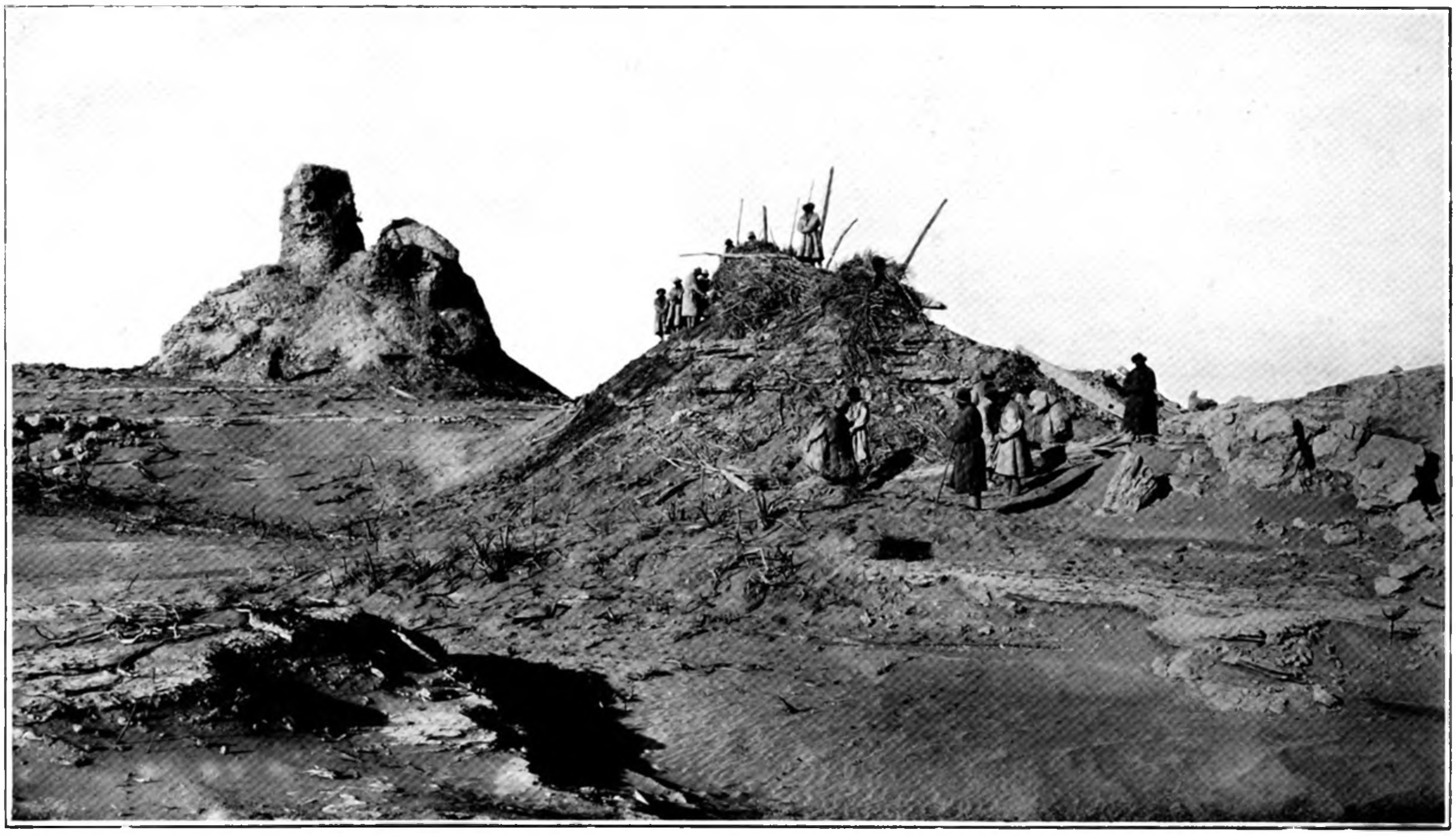
[8] Cf. *Ancient Khotan*, i. pp. 347 sqq., 364 sq.

[9] Cf. below, pp. 404 sq.

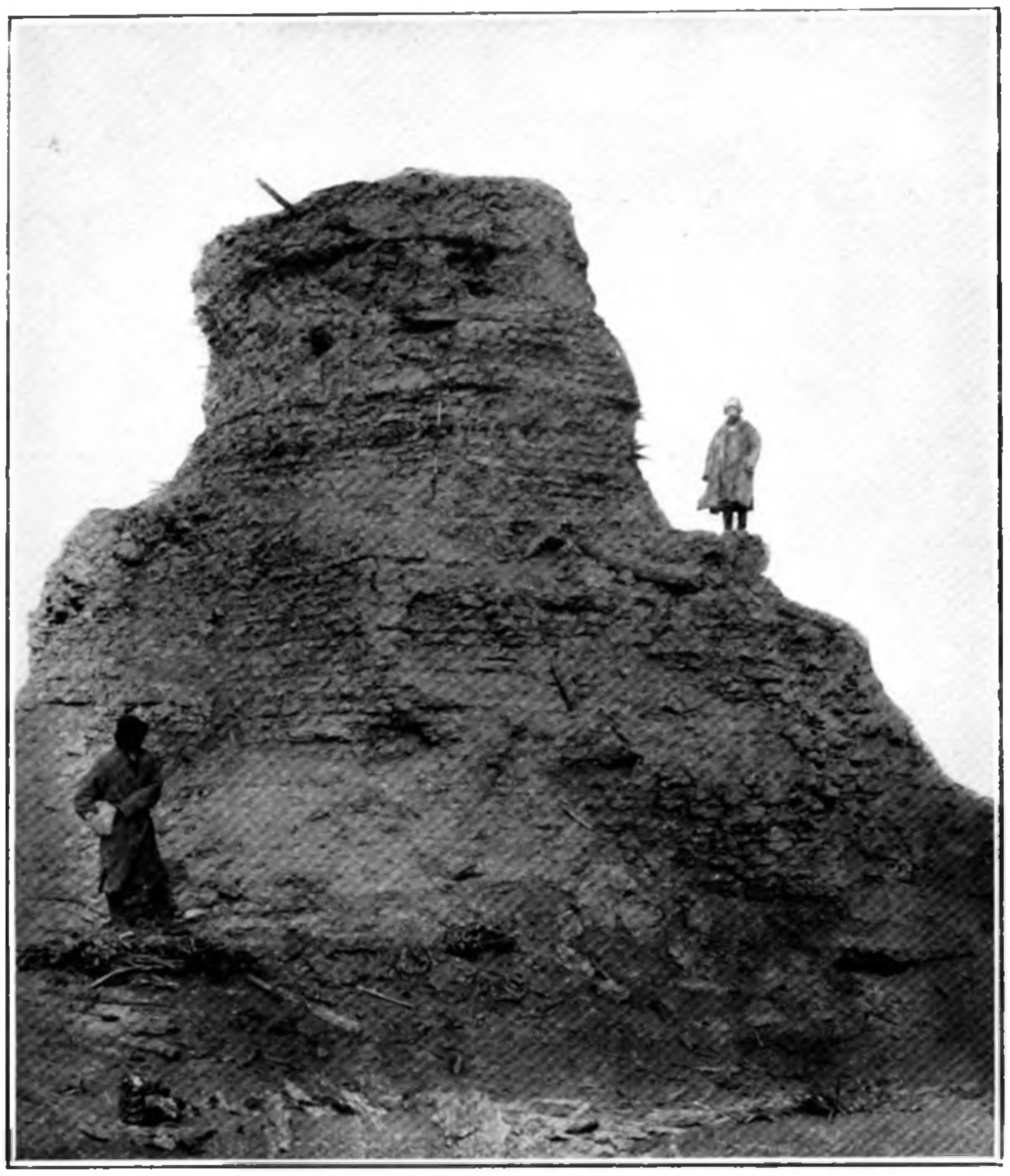
[10] For facility of reference Chinese records are here and hereafter quoted with the serial numbers given to them by M. Chavannes in his *Documents*, as well as with their proper site-marks.



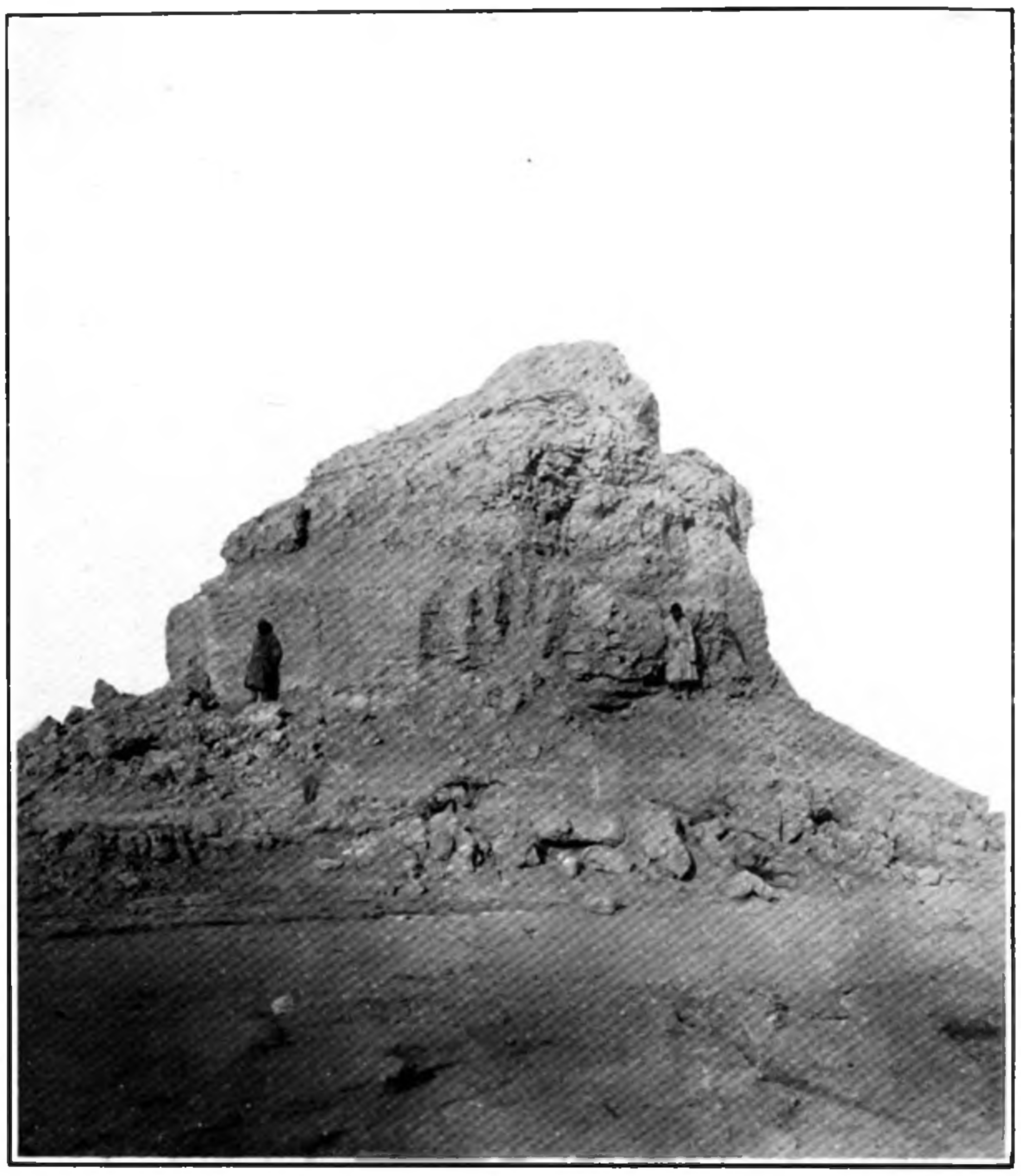
94. RUIN OF ANCIENT DWELLING L. A. I AND OF STŪPA, LOU-LAN SITE, SEEN FROM SOUTH-EAST.
Figure of man, standing at foot of 'witness' bearing ruin L. A. I, marks depression caused by wind-erosion.



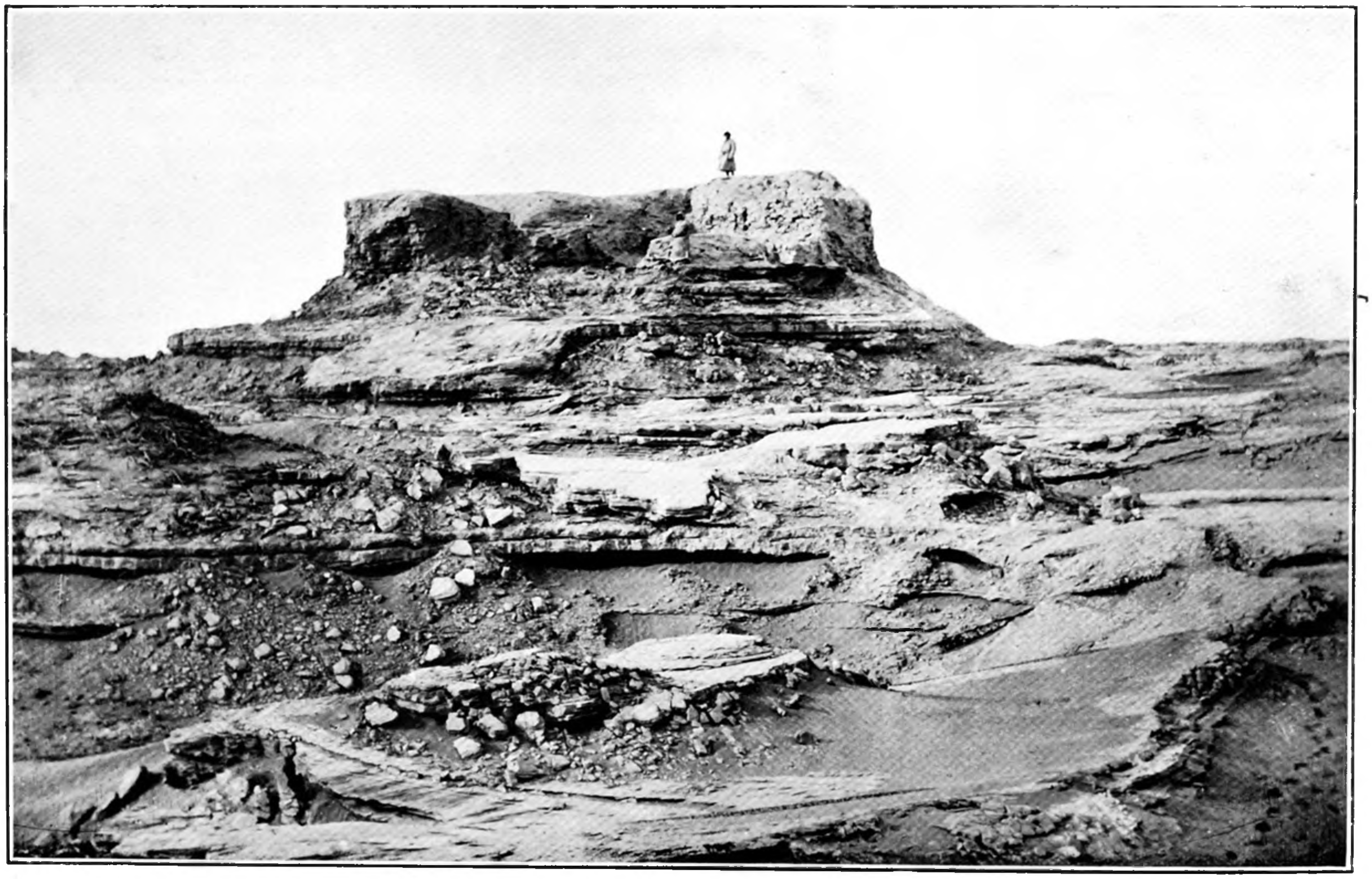
95. STŪPA RUIN AND REMAINS OF ANCIENT DWELLING, L. A. IX, SEEN FROM SOUTH.
Dead tamarisk growth at foot and on slope of wind-eroded ridge bearing L. A. IX.



96. RUINED STŪPA, L.A. X, LOU-LAN STATION, SEEN FROM SOUTH.
Man on left stands at foot of base, man on right on top of base.



97. STŪPA RUIN THREE MILES TO N.W. OF LOU-LAN STATION, SEEN FROM SOUTH.



98. DECAYED STŪPA MOUND L.A. XI, TO EAST OF LOU-LAN STATION, SEEN FROM SOUTH EAST.
Lower figure of man marks original ground level at foot of Stupa.

there to the present day,[11] which I had so far succeeded in bringing to light. The technical details concerning the arrangement of warp, weft, and pile are explained in Mr. Andrews' description of L.A. VI. ii. 0046, a subsequently-found and better-preserved specimen. There the peculiarity of the long woollen tufts with free ends which both specimens show on the back, and which make them resemble the modern cheap Japanese rug in this respect, has also been discussed. Whether these carpets actually came from Khotan it is, of course, impossible to assert. But considering the practical monopoly which the Khotan carpet industry has enjoyed for a long time past in Chinese Turkestān and the historical evidence for its ancient date, the surmise seems to me justified.

Among the miscellaneous fragments of fabrics plentifully recovered from the refuse, L.A. I. iv. 0011, pieces of plain woollen materials in brown, buff, and red prevail. In these and the fragments of felt, dyed yellow, red, and scarlet, it is quite safe to recognize local products. The abundance of wool in the Lop region is well attested by the early Chinese accounts and, owing to the pastoral facilities continuing in the riverine jungle of the Tārīm and in the mountains above Charkhlik, still exists at the present day. On the other hand, the numerous small pieces of fine silk in a variety of rich colours, undoubtedly shreds of garments, which were found in the rubbish both at this and some other ruins of the site, were certainly derived from Chinese imports. I knew that the ancient silk trade of China with Central Asia and beyond must have moved for centuries along the very route marked by this ruined settlement, and that to it the latter owed its original *raison d'être*. Yet I could scarcely hope at the very outset to find so striking and instructive a relic of that early trade as came to light that day in the immediate vicinity of this ruin.

Relics of Chinese silk trade.

To the north-north-west, the terrace on which stood L.A. I was connected by a kind of neck with a larger piece of ground immediately south of the Stūpa base which, though attacked by wind-erosion, had yet in places retained its original level under the protection of timber débris and what appeared to be a flooring of reed fascines. It is possible that this had served as a foundation for walls, but these could no longer be traced. On clearing the ground here of a light layer of drift-sand there was found, flush with the original flooring, a small bale of yellow silk, L.A. I. 002 (see Plate XXXVII), tightly rolled and evidently unused, which had become so dry and brittle that when first lifted it broke in two. Its actual width was $18\frac{3}{4}$ inches, its diameter $2\frac{1}{2}$ inches. It was useless to speculate how it had come to be left behind when the structure once standing here was abandoned, or how it had escaped those who, during the immediately succeeding period, were likely to have searched the deserted settlement for any objects of value or practical use. But what I could realize at once was that this find showed us for the first time the actual form in which that most famous product of the silk-weaving Seres used to travel from China to the classical West.

Find of silk bale.

A series of interesting finds made afterwards has settled it beyond all doubt that the width shown by this little silk roll was the regular one adopted for China's most important article of export in the centuries immediately before and after the commencement of our era. Decisive evidence on this point is furnished by two strips of undyed silk, T. XV. a. i. 3 (*Doc.* No. 539; Plate XV), which I discovered about four months later at one of the ruined watch-stations of the ancient Chinese Limes west of Tun-huang, and the inscription on which M. Chavannes has examined and explained.[12] One of them, bearing a seal imprint and complete in height, shows that the piece of silk to which it belonged had a width of 50 centimetres (19·69 inches). The other, 30·5 cm. long and incomplete, bears an inscription in Chinese exactly indicating the origin, dimensions, weight, and price of the piece of silk: 'A roll of silk, from K'ang-fu in the Jên-ch'êng Kingdom; width 2 feet 2 inches; length 40 feet; weight 25 ounces; value 618 pieces of money.'

Width of silk in Han times.

[11] Cf. *Ancient Khotan*, i. pp. 134, 174, on the Khotan carpet industry and early Chinese references to it.

[12] See Chavannes, *Documents*, p. 118; for M. Chavannes' correction in his interpretation see below, chap. XIX. sec. iv.

The mention of the kingdom of Jên-ch'êng, which was established A.D. 84 in the province of Shan-tung, still one of the chief silk-producing regions of China, proves the piece of silk to date from the end of the first or beginning of the second century A.D.

Chinese inch measures of Han period.

The measure of 2 feet 2 inches recorded for the width of the piece enables us to establish the standard width for silk during the later Han period by evidence independent of the actual state of the strip. My excavations along the line of the Chinese Limes west of Tun-huang have brought to light two wooden measures which accurately determine the value of the (decimal) Chinese inch at that epoch. The measure T. VIII. 4 shows a foot divided into ten inches, each $\frac{9}{10}''$ or 22·9 millimetres long. The other measure, T. XI. ii. 13, a slip of cane, is marked with inch divisions of exactly the same length. The measures were found at watch-towers which can both be proved, from dated documents recovered there, to have been occupied during the first and second century A.D.[13] Accepting the value of 22·9 mm. for the inch of the Later Han period, we get 50·38 centimetres (or 19·83 inches) as the equivalent of the measurement, 22 Chinese inches, indicated as the proper width in the inscription of T. XV. a. i. 3. And with this the actual width, 50 cm. as measured by M. Chavannes, practically coincides. Turning now to the silk roll L.A. I. 002, we find its actual length to be 18·75 inches, or about one inch less than the standard width just determined. But a glance at the reproduction in Plate XXXVII shows that both ends of the roll, and in particular the upper one, have become frayed through abrasion, and this circumstance, together with the probable shrinkage of the fabric during so many centuries' deposit in dry sand, is amply sufficient to account for the slight difference.

Standard silk width unchanged.

We are thus justified in concluding that the standard width for silk, as established during the Later Han period, did not undergo any change in the times of the Chin dynasty to which the roll L.A. I. 002 must be assumed to belong. The dimension of the Chinese inch had been altered considerably in this later period, if we may judge from the measure L.A. II. vi. 001 (Plate XXXV), to be described below, which shows decimal divisions of $\frac{13}{16}''$ or 30·16 mm. each. But it is only natural that an important article of foreign export like silk remained unaffected in its trade dimensions by this change in the units of measurement.[13a]

Miscellaneous relics from L.A. I. iv.

The refuse found amidst the timber débris of L.A. I. iv, apart from the remnants of fabrics already mentioned, contained a number of small objects of household use which will be found fully described in the List below. The briefest reference will suffice here to such as the wooden spoon, L.A. I. iv. 008; the pair of eating sticks, L.A. I. iv. 006–7; the fragment of a lacquered bowl, L.A. I. iv. 0015. The small carefully-carved stick, with a cross piece at one end, L.A. I. iv. 009 (Plate XXXV), corresponds exactly to the modern *chŭluk* of Chinese Turkestān, used for tying up lambs to a rope which is stretched on the ground. Its use must have been wide spread in ancient times, too, as the specimens found at other early sites (L.B. IV. ii. 009; N. XIII. i. 002; Ka. I. 008) prove. More puzzling in character are the numerous small pointed 'labels' in thin wood, L.A. I. iv. 11. a–b (Plate XXXV). Two holes pierced through the square head and having a sunken border at each end suggest some system of threading which would have allowed these pieces of wood, about three inches long, to be used as scales of an armour somewhat after the fashion of scales of hard leather found at the Niya Site.[14] But there remain obvious difficulties of a technical kind which render this explanation for the present uncertain. Attention may also be

[13] Cf. Chavannes, *Documents*, pp. 126, 145; also below, chap. XVIII. sec. i, iii.

[13a] That the standard width of silk was enlarged at some time between the Chin period and the tenth century is proved by silk paintings found in the Ch'ien-fo-tung cave which are made of one breadth of silk. This in Ch. 00224, dated A.D. 939, measures 24 inches, and in Ch. 0067, 22 inches; see below, chap. XXV. sec. ii.

The piece of silk found at M. x of the Mīrān site, also of later origin, measures 22½ inches; see chap. XIII. sec. viii.

[14] Cf. *Ancient Khotan*, i. pp. xvi, 411; also the lacquered leather scales found at Mīrān, see below, chap. XII. sec. iv.

called to two fragments of pottery, L.A. I. iv. 001, 002, which have retained their glazed surface, in two different tints of green. Its preservation is manifestly due to these pieces having been embedded in refuse. The rarity of such glazed potsherds elsewhere at the site is accounted for by the corrosion to which all pottery remains, left unprotected on the ground, are exposed here from wind-driven sand. L.A. I. iv. 002, with its finely crackled leaf-green glaze, suggests Chinese pottery of the Han type, like the similarly crackled glaze in red of L.A. 005. In the other fragment, L.A. I. iv. 001 (Plate IV), which is decorated with an incised pattern, the dark green glaze recalls Western influence. **Glazed pottery fragments.**

Finally I ought to record here that the careful search of the débris-covered slopes of L.A. I. resulted also in the recovery of seven Chinese coins, mostly fragmentary. They all belong to the type marked by the legend *Wu-chu* and assumed to have been first introduced by the Emperor Kuang Wu-ti, A.D. 26–57. ***Wu-chu* coins found.**

Section II.—EXPLORATION OF RUINED DWELLINGS, L.A. II–VI.

After completing the search of the isolated dwelling south of the Stūpa, I moved my band of labourers to the large group of ruined structures on the south-west. It occupies a terrace-like piece of ground, about two hundred yards broad at its widest, near what my subsequent surveys have proved to have been the centre of the walled square enclosure marking the ancient Chinese station (see Plate 23). Surrounded on all sides by wind-eroded depressions, twelve feet and more deep, this ground had escaped being broken up into Yārdangs through the protection which the various ruined structures occupying it, L.A. II–VI, had afforded. In the main building, L.A. II (Plate 25), which appears to have originally had a rectangular enclosure solidly built of large sun-dried bricks, the thick walls of three narrow apartments still rose to a good height, as seen in Fig. 101. Here I easily recognized the spot where Dr. Hedin had come upon his 'find' of Chinese records on wood and paper. From the rubbish layers which covered the floor of the easternmost and narrowest of these apartments, L.A. II. ii, he had recovered forty-two narrow tablets or 'slips', no doubt of the type already described, and about two hundred pieces of inscribed paper, most of them torn fragments.[1] **Brick-built structure, L.A. II.**

A first rapid inspection sufficed to show me that the contents of this refuse-heap, originally so well sheltered, had not been completely exhausted. Notwithstanding the statement that 'the contents of the stall were sifted to the very last grain until we came in fact to the hard bare ground underneath, and had literally cleared out the whole of the interior', the thorough search I made here revealed a great quantity of fragments of inscribed paper and wood. A number of these, including a wedge under-tablet with Kharoṣṭhī writing, L.A. II. ii. 003, were found in the rubbish still about two feet deep, which Dr. Hedin's men had dug up but not removed from the small apartment. But far more turned up in the refuse which had been thrown out and left to litter the eroded slope immediately south (L.A. II. i). From this two packets full of Chinese fragments were ultimately recovered. The thin, curled pieces of wood which formed the majority were obviously shavings from Chinese slips of the regular size which had been scraped down in order to be used afresh for writing.[2] The economy practised by the fresh use of this old stationery finds its obvious explanation in the fact that the material of these slips seems to have been ordinarily a pliable smooth wood, often of some conifers, which could not have been obtained locally. **Documents from refuse heap, L.A. II. ii.**

It is worth noticing that among the Chinese documents here recovered there is a complete

[1] Cf. Hedin, *Central Asia and Tibet*, ii. p. 132; *Central Asia*, ii. p. 632.

[2] For specimens of such shavings, see Chavannes, *Documents*, Nos. 739–41, Pl. XXIII; Nos. 878, 885 (Pl. XXVII). For other records from L.A. II. i, ii, cf. *Documents*, Nos. 879–884, 893, 896–902, 905–909.

Chinese records dated A.D. 265–274.

letter on paper, L.A. II. i. I: *Doc.* No. 904, which was found in its original form of a small convolute as intended for transmission, and also that the dated documents among those which M. Chavannes has included in his publication all belong to the years A.D. 265–74. As with one exception the dates in those of Dr. Hedin's finds about which some preliminary information has so far become available range between the years A.D. 264–70,[3] it seems safe to assume that the little apartment became filled with refuse and the 'waste paper' deposits it contained during that period or soon after.

Remains of ancient 'Ya-mên.'.

The prevailingly official character of the documents found here and of those, still more numerous, which my clearing of the closely adjacent and extensive refuse layers, L.A. III. i and VI. ii, has yielded, makes it certain that the complex of ruined dwellings marked by me as L.A. II and III (see Plate 25) represents what is left of the accommodation which served for the Chinese administrative headquarters established in the ancient station. In size and general arrangement, it curiously recalled the Ya-mêns which are occupied now by Chinese officials in charge of districts, etc., within the 'New Dominion' and eastwards, and which are meant to accommodate not only these officers with their families and personal attendants but also their subordinate staff, treasury, administrative stores, and the like. The resemblance was so obvious that my Charkhlik labourers promptly and quite spontaneously came to call L.A. II 'the Ya-mên of the Kōne-shahr'.

Brick-built walls of L.A. II.

The most striking feature of the surviving ruin is the T-shaped massive wall of large sun-dried bricks against which all traceable rooms of L.A. II appear to have been built. It could be followed in the direction E.N.E. to W.S.W. for about 150 feet with an arm adjoining it at right angles eastwards and still extending for about 105 feet. As in the case of all brick structures of the site, there was a layer of tamarisk fascines below forming a foundation. With regard to the former portion of the T-shaped wall, the fact that it lies exactly in the direction of the prevailing wind is sufficient to explain its escape from complete erosion. Even thus most of its length, except behind the small apartments ii–iv and near room v, had been worn down almost to ground level. The other wall, forming the top of the T and lying right across the prevalent direction of the wind, had suffered even more by abrasion and would have disappeared altogether but for the heavy timber débris which covered the eroded slopes on either side. It appears probable that this cross-wall originally extended further to the N.N.W., and that it was the prolonged resistance offered by the structures once adjoining this wall which saved the remains of L.A. II, III, v, and VI from being even more eroded. At the S.S.E. end of this cross-wall, and in a corresponding position to the south of L.A. III (see Fig. 102), the timber débris strewing the eroded slopes was particularly heavy, suggesting structures at the ends of what might have been two wings flanking the main court of the 'Ya-mên'. But this must necessarily remain mere conjecture. It may, however, be noted that on the slope to the south of L.A. III. iii, and some three feet below its floor level, remains of a brick wall or platform, six feet wide, cropped out, indicating, perhaps, the existence in a similar position of some earlier structure. The brick walls of L.A. II showed an average thickness of about 3′ 6″, and the bricks measured 18–19″ in length and 12–13″ in width, with a thickness of 4″.

Narrow apartments, L.A. II. ii–iv.

The three narrow closet-like apartments, II. ii–iv (see Fig. 101), which have already been referred to, are formed by cross-walls projecting to about 18 feet from the main wall of L.A. II. Their southern ends are broken, and the exact length of these narrow apartments could not be determined. As seen in Fig. 99, the cross-walls are constructed of sun-dried bricks of the previously mentioned size, with the successive courses separated from each other by layers of stamped clay of about the same thickness. The cross-walls still rose in places to a maximum height of ten feet and

[3] Cf. Himly's paper quoted by Dr. Hedin, *Central Asia and Tibet*, ii. p. 144.

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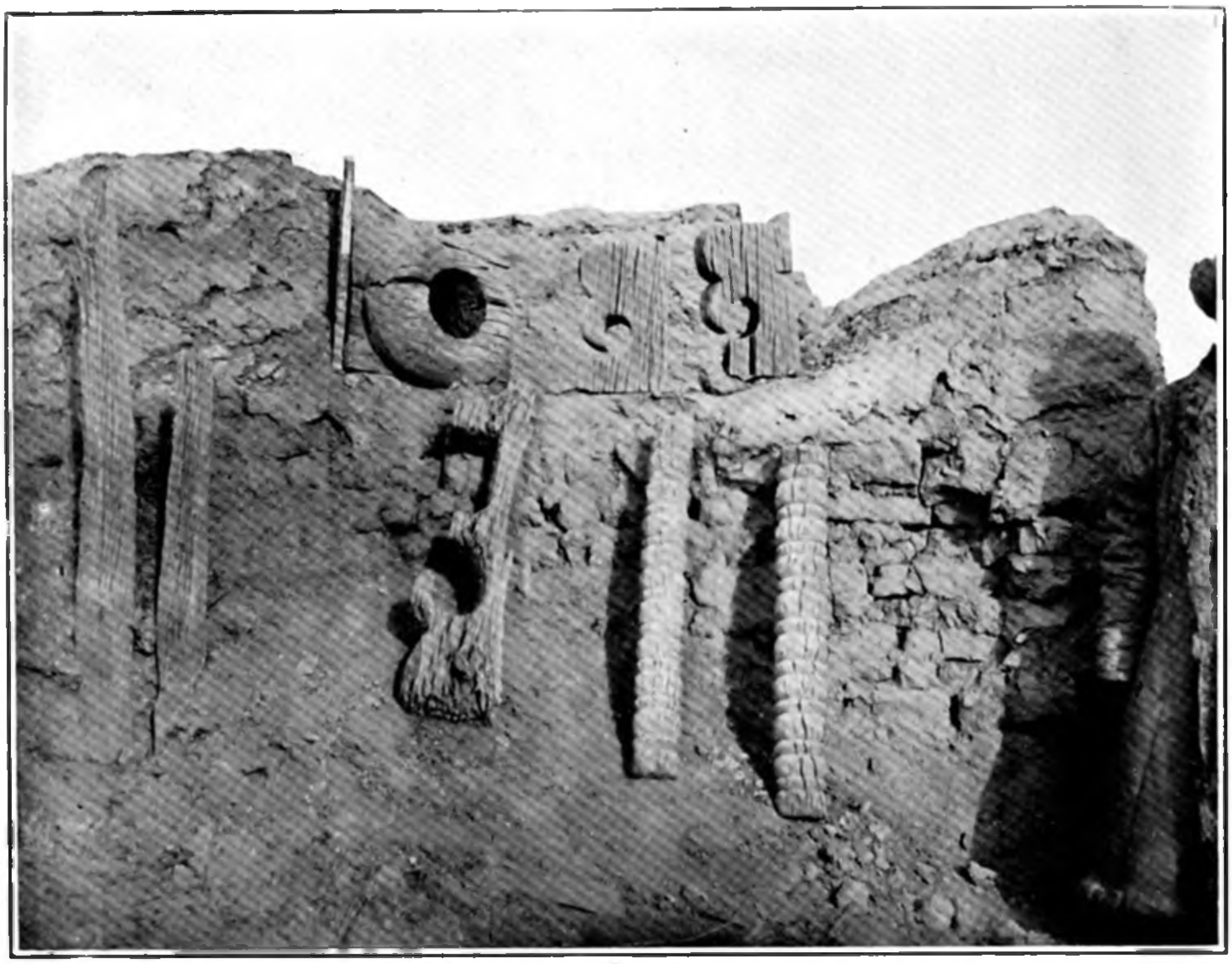
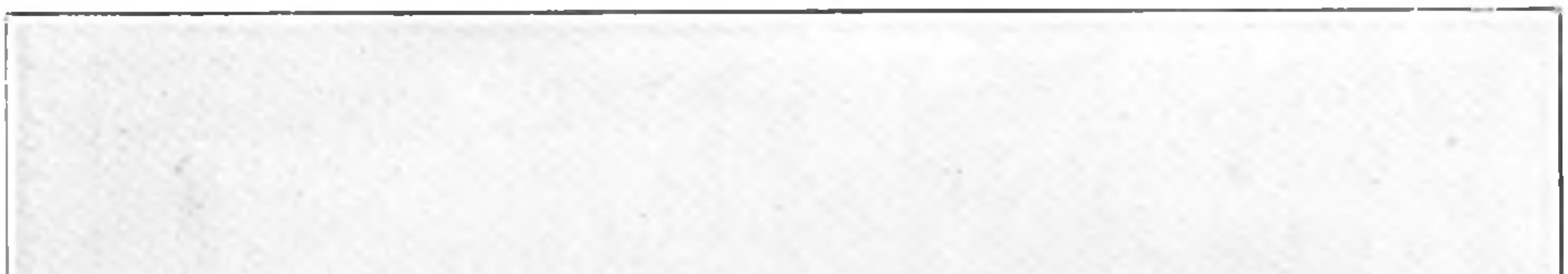
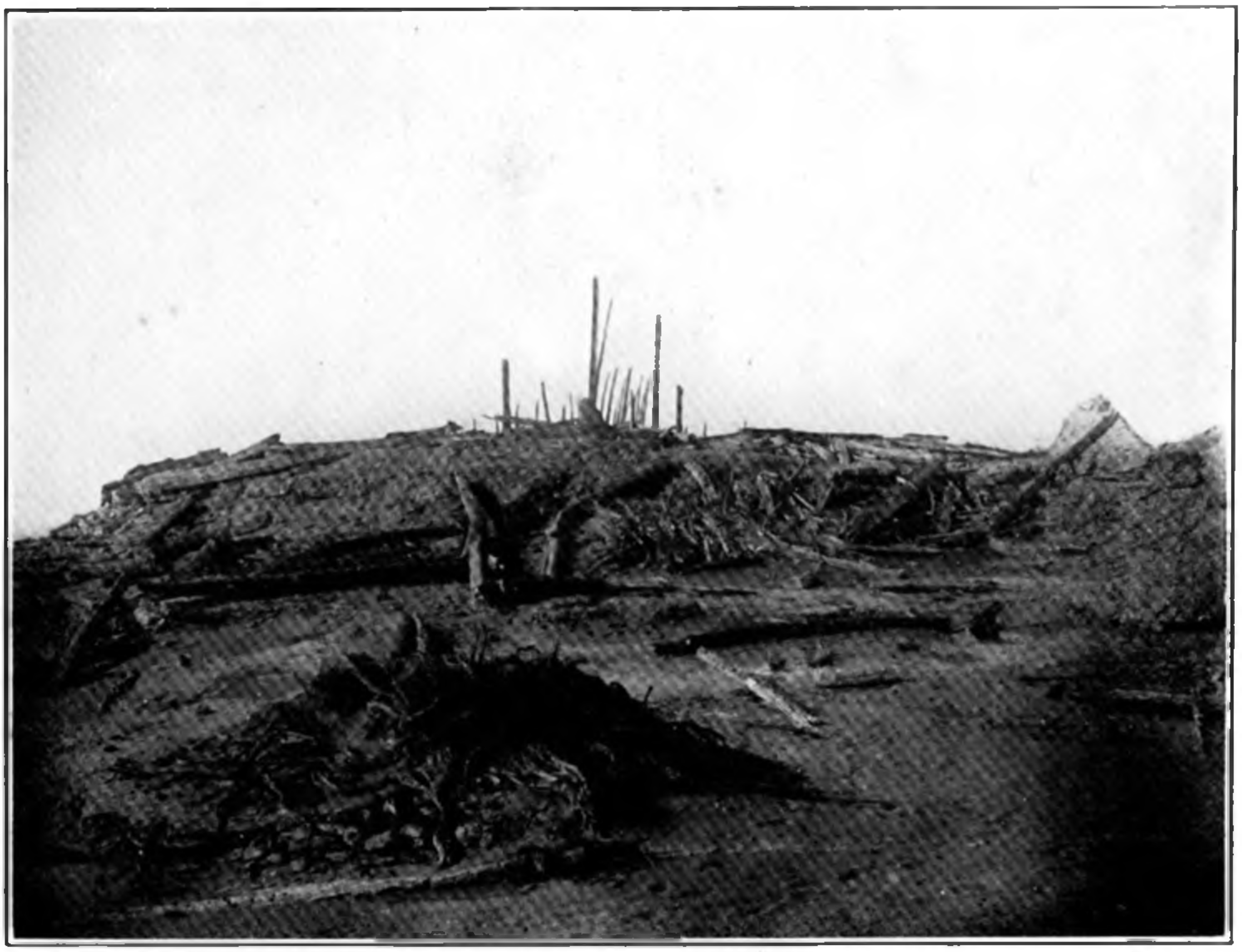


99. REMAINS OF WOOD-CARVINGS FROM RUIN L. A. III, LOU-LAN STATION.



101. SOUTH-WEST WING OF RUIN L. A. II, SEEN FROM SOUTH-EAST.

100. REFUSE HEAPS OF L. A. VI ii, LOU-LAN STATION, IN COURSE OF EXCAVATION.



102. REMAINS OF RUIN L. A. III, LOU-LAN STATION, SEEN FROM NORTH-EAST.

103. REMAINS OF RUINS L. B. II, III, LOU-LAN SITE, SEEN FROM EAST BEFORE CLEARING.

104. DECORATED WOOD-CARVINGS FROM RUIN OF BUDDHIST SHRINE L. B. II, LOU-LAN SITE.
In foreground on right fallen timber frame from wall.

showed a varying thickness from three to four feet. With the exception of the refuse deposit within II. ii already described, the most curious feature of these small apartments was their narrowness, particularly disproportionate to the thickness of the dividing walls. The one furthest to the north-east, II. ii, measured only four feet across, and the other two, iii and iv, nine feet six inches and four feet respectively. In the absence of distinctive finds—none were made in any of the three apartments—it seems difficult to guess their original purpose. But it is unlikely that they could have been constructed to serve as quarters. In view of the remarkable thickness of the walls it has occurred to me that they might have been intended for store-rooms or possibly prison cells. It is obvious that an ancient Chinese 'Ya-mên' at an important station would have needed both, just as they are usually provided in similar modern structures.

Documents found by Mr. Tachibana.

Dr. Hedin had found both rooms iii and iv filled with sand to a height of over three feet, and on clearing this had come upon 'only two or three pieces of torn paper'.[4] I myself had the floor, over which a fresh layer of drift-sand had accumulated, carefully searched again without any result. It was left for Mr. Tachibana, on his rapid visit paid to this site in 1910, to discover here the interesting Chinese document dating from A. D. 324 and representing the draft of a letter from the *Chang-chih* Li Po, to which I shall have to recur below.[5] From the verbal explanations that the young Japanese explorer was able to give me in the autumn of that year, he appears to have found it in an interstice of the brickwork of a wall within room iv, and at some height above its floor. The examination I was able to make of the little apartment in February, 1914, showed in two places shallow niches or holes which appeared to have been roughly broken out from the wall. In the absence of further and more exact information, I assume that Mr. Tachibana had made his interesting discovery in a small fissure or hole between two bricks and had subsequently enlarged it in the hope of finding more. It is impossible, of course, to guess how the crumpled-up sheet of paper had found its way into that fissure. But in any case its discovery in such a place suggests that the interior walls had at the time already lost the plastered surface which they must, no doubt, once have had, the structure being more or less in a state of ruin. Hence the discovery does not affect the doubt expressed above as to these rooms having been constructed for ordinary occupation as quarters.

Finds in room L.A. II. v.

Within the angle of the main wall and the north-eastern cross-wall of L.A. II lay the room v, measuring about 30 by 12 feet inside. From the fact that along a portion of its north wall there were found remains of a narrow platform, about two feet high, and in the wall behind it a cupboard-like recess about eight inches deep, it may, perhaps, be concluded that it had been used as a living apartment or office. In this room were found four Chinese documents on wooden slips, among them two complete (*Doc.* Nos. 750 and 820) and one dated A.D. 263 (L.A. II. v. 3, *Doc.* No. 738). Embedded in the floor just below the platform lay the oblong tablet L.A. II. v. 5, showing remains of Kharoṣṭhī writing. It had probably reached this position some time before the site was abandoned; for the wood was rotten and eaten by insects and the surface badly perished by damp. Here were also recovered a well-preserved bronze bolt, L.A. II. v. 002 (Plate XXXVI), with a square head at one end, and the fragment of a kiln-fired clay bowl, L.A. II. v. 001, with a deep leaf-green glaze recalling Han pottery.

Constructive features in rooms L.A. II. vi, vii.

Immediately to the west lay a small detached structure built of timber and plaster, of which two rooms, L.A. II. vi and vii, still showed the lines of their walls marked by upright posts and remains of horizontal reed wattle (see Fig. 101, on extreme right). The room vi had at its north-east end a sitting platform built in clay, two feet eight inches high and five feet wide, approached by three steps. The wall dividing it from room vii showed remains of a panelled

[4] Cf. Hedin, *Central Asia*, ii. p. 633.

[5] Cf. below, p. 409.

window, six feet wide and flanked by posts, above the centre of this platform. As I had found an exactly corresponding arrangement in the ruins N. xxiv and N. xxvi of the Niya Site, described above,[6] we have here fresh evidence how closely the constructive features of dwellings agreed in widely distant parts of the Tārīm Basin during the third century A.D. In room vi was found the wooden measure L.A. ii. vi. 001 (Plate XXXV) already mentioned.[7] In room vii the posts and wattle showed signs of having been partially destroyed by fire, and charred fragments of wood were found under the drift-sand covering the floor.[8]

Wood carvings found in L.A. iii.

The structural remains marked L.A. iii (see Fig. 102, Plate 25) seem, as already explained, to have belonged to the south-western wing of the 'Ya-mên'. Of the large room, L.A. iii. iii, measuring about 35 by 28 feet, the walls of timber and horizontal reed wattle were clearly traceable on two sides only, the rest being badly eroded. Some of the posts, however, still stood upright; two among them, which must have carried one of the beams supporting the ceiling, still rose to a height of 13 feet. This room had been searched by Dr. Hedin, who had found in or near it a large and well-preserved earthenware jar, a decorative wood-carving, and what he took to be the solid wooden wheel of a cart.[9] Among the pieces of architectural wood-carving left behind, Fig. 99 shows the wooden circular base with socket on which one of the central pillars had once stood, a badly splintered double cantilever on which one of the roof beams must have rested, two volutes probably also from cantilevers, and two turned balusters with elaborate mouldings similar to those subsequently recovered from L.B. iv (Plate XXXIII). All these pieces were of Toghrak wood.

Records from refuse-heap, L.A. iii. i.

On carefully clearing the floor of the small and almost completely eroded apartment ii, we came upon two fragmentary Chinese slips, and when this search was extended to the ground immediately adjoining on the south-west, which I first assumed to have been occupied by another portion of the structure, L.A. iii. i, Chinese records on wood and small miscellaneous relics rapidly cropped up in numbers. Thus some thirty-seven slips bearing Chinese writing were recovered here, besides two small fragments of Kharoṣṭhī documents on wood. Among miscellaneous finds may be specially mentioned a bronze arrowhead, L.A. iii. 001 (Plate XXIX); the portion of a wooden bowl, lacquered red and black, L.A. iii. 004; a lacquered wooden style, perhaps intended for writing, L.A. iii. i. 002; and a small fragment of an earthenware dish, L.A. iii. 002, decorated with a faintly lustrous slip in green, resembling Chinese work of Han times. In reality, we had here struck the easternmost portion of that huge refuse-heap L.A. vi. ii, the subsequent discovery of, and abundant yield from, which we shall have to describe presently.

Finds in dwelling L.A. iv.

The ruin to which I turned on December 19, after clearing the last-named apartment of what we called the Ya-mên, was that of a relatively large dwelling, L.A. iv, close on a hundred yards to the south-west. It comprised, as the plan in Plate 24 shows, a number of rooms of varying sizes up to 21 feet square, roughly built with walls of timber and vertical tamarisk rushes, and in addition to these, in the centre, a group of apartments more solidly constructed of stamped clay or of timber and plaster.[10] Sand filled it to a height of three to four feet. The room i, about 13 by 12 feet inside and built with walls of stamped clay about three feet thick, was provided with a low sitting platform of clay along three of its walls and with a fire-place, also of clay, on the fourth. The internal arrangement thus corresponded exactly to that observed in many of the

[6] Cf. above, pp. 226, 234 sq., with Figs. 62, 63, 64, and Pl. 14.

[7] See above, p. 374.

[8] This explains Dr. Hedin's erroneous assumption, *Central Asia*, ii. p. 631, that this room was a smithy.

[9] Cf. Hedin, *Central Asia*, ii. pp. 633 sq. with the excellent photographs in Pl. LXX, LXXI.

[10] For a good view of part of this ruin see Hedin, *Central Asia*, ii. Pl. LXXII.

ancient dwellings I had excavated at the Niya Site and elsewhere in the Khotan region.[11] In the small passage-like apartment ii that adjoined it, and close to the door, still retaining its wooden frame, which led into a kind of central hall, there were found three rectangular double-tablets with Kharoṣṭhī text, L.A. IV. ii. 1–3 (Plate XXXVIII). Considering that they lay on three feet of sand and almost on the surface, their preservation was surprisingly good. This was partly due to the first two documents being found wrapped up in rags. Among these was the stout cotton fabric, L.A. IV. ii. 001, remarkable both on account of its material, as analysed by Dr. Hanausek, and its interesting texture, which suggests its having originally been intended for wear under armour as a gambeson. It is clear that these Kharoṣṭhī tablets must have fallen to the place where they were found from a receptacle in the wall or above the door.[12] This door was curiously low, like the other two in L.A. IV of which the lintels and cross-piece were still in position.

Constructive features of L.A. IV.

The central hall in its size, 28 by 21 feet, and general plan distinctly resembled that of the 'Aiwān' still common in modern Turkestān houses. In it the central pillar could still be fitted with the plain massive bracket on which the roof beam had rested. The purpose of the space boarded off, in the eastern corner, with a sort of low railing, could not be made out. The large room, about 22 feet square, adjoining the south-eastern wall, does not communicate directly with the rest of the house, and may, perhaps, from this position be assumed to have corresponded to the *mihmān-khāna* or guest-quarters usually found nowadays in well-to-do people's houses in the oases of the Tārīm Basin. No finds were made either here or in the smaller rooms on the other side of the central hall. Their walls showed a wattle of vertical bundles of tamarisk branches, which were held in position by horizontal twists of the same material tied to a framework of posts. Vertical reed bundles filled a space of about two to three inches wide within the tamarisk wattle, and its outside faces were originally coated with mud plaster to a total thickness of about eight inches. These walls had resisted wind-erosion far better than might have been expected from their rough construction. The reason, no doubt, is that such walls, with their closely set and yet pliable fascines, offered less scope for the corrosive action of wind-driven sand than solid walls of brick or superior wattle, and, in fact, could protect themselves by catching and retaining the drift-sand.

Tamarisk and reed wattle.

Two small deposits of refuse adjoining the house added their quota of finds. From one near the west entrance of the central hall, iv, came the fragment of a rectangular under-tablet in Kharoṣṭhī, L.A. IV. iv. 1, and a complete Chinese document on paper, *Doc.* No. 903, containing the record of a tribute of various pieces of silk offered by a certain barbarian.[13] In another small refuse-heap to the north-east, near room i, were found the partially bleached Kharoṣṭhī wedge under-tablet, L.A. IV. 001, and fragments of a well-woven woollen material, L.A. IV. 004 (Plate XXXVII). Details as regards the technique of its weaving and the pattern shown by the well-preserved colours will be found in the descriptive list.[14]

Find of Kharoṣṭhī records at L.A. IV. v.

A striking and more abundant discovery of records was made at a heap of timber débris, L.A. IV. v, which occupied the top of a small and badly eroded terrace some twelve yards to the north of the north-west corner room of the house. The original dimensions or shape of the small structure of which this débris represented the last remnant could no longer be made out. Here, quite close to the surface, when the sand had been scraped away, were found eleven Kharoṣṭhī documents on wood, six of oblong shape together with four pieces of wedge tablets and one

[11] Cf., e.g., Pl. 8, 14, 15, 17; *Ancient Khotan*, Pl. XXVIII, XXXIV, XXXV.

[12] This door of L.A. IV. ii is seen on the extreme left in Hedin, *Central Asia*, Pl. LXXII.

[13] The wrongly read site-mark, L.A. IV. i. 1, Chavannes, *Documents*, p. 186, should be corrected into L.A. IV. iv. 2.

[14] See below, p. 434.

rectangular covering-tablet. As a consequence of the exposed position in which these tablets had lain, the surface of almost all had suffered badly through bleaching and cracking. But, on most, Kharoṣṭhī writing was still traceable in parts, and on a few, L.A. IV. v. 3, 9, 12 (Plate XXXVIII), columns of lines, clear and black, had survived. The rapid examination I was able to make on the spot suggested that the oblong tablets with their columnar writing contained accounts or office memos. In one I thought that I made out a list of Indian-looking personal names, all in the genitive case.

Evidence of indigenous administration.

This discovery of Kharoṣṭhī records, added to those made in room ii and outside the house, was enough to convince me at the time that the ruin L.A. IV marks the residence of a non-Chinese official belonging to the indigenous administration of the territory. I shall have occasion to refer below to the indications which make it highly probable that here, too, Chinese control, military and political, had allowed the indigenous administration to continue undisturbed in the hands of the local ruling family. The first direct evidence of this was furnished to me on the spot by one of the rectangular double-tablets found in L.A. IV. ii. Its shape was sufficient to prove that it was a full official document and hence dated, and on examining the opening formula I found that the dating was, just as in the Niya Site rectangular double-tablets, by the year of the reigning Mahārāja. But the name, which I then read as Dugaka, entirely differed in formation from the names of rulers recorded in the documents of the far-off Niya tract.

Besides these Kharoṣṭhī tablets, L.A. IV. v yielded a number of fragments of fabrics, including several much-torn pieces of a well-made woollen rug, L.A. IV. v. 002 (Plates XXXVII and XLIX), with an elaborate coloured pattern, details of which will be found in the descriptive list.[15] There was found also an interesting wooden bar, L.A. IV. v. 001 (Plate XXXV), which appears to have formed part of the saddle-gear of a pack-animal, but the exact use of which still remains to be determined.

Finds in dwelling L.A. v.

The ruin next cleared was that of the small dwelling, L.A. v (Plate 25), situated about twenty yards to the north of L.A. III. What remained of the rooms, built of timber and horizontal reed wattle, had suffered badly through erosion, and the covering of sand on the floor was only two feet deep or less. So it was not surprising that the three Kharoṣṭhī tablets found in the southernmost room, i, showed a bleached surface only marked by faint writing. Yet on a small wooden seal, *Doc.* 889 (Plate XXVII), which came to light here, the raised Chinese characters, giving the name and place of origin of its owner, had remained in excellent preservation. The Chinese slip, *Doc.* 891 (Plate XXVII), found here also retained its writing in fair condition. From the thin layer of refuse in the adjoining court, ii, we recovered besides a Chinese record on wood, *Doc.* 890, and two Kharoṣṭhī tablets, L.A. v. ii. 2, 4, an excellently preserved wooden fire-block, L.A. v. ii. 1 (Plate XXXV).

Wooden fire-block.

Along one side it shows four charred holes or 'hearths' partially sunk through the thickness of the wood and communicating with the edge by means of flat grooves through which the spark could reach the tinder. Threaded on a thong of white leather, and still attached to the block through a hole in the centre, is a small peg of very hard wood, with one end sharpened into a point, the other conical and just fitting the holes. The latter end shows signs of fire and evidently was once revolved in the holes. As pointed out by Mr. Joyce in his note on this and other fire-sticks in my collection,[16] this peg was probably cut down from an old broken 'male' fire-stick and attached to the 'female' fire-block to allow it to be conveniently fixed to the wall. I have already referred elsewhere to the curious evidence which this and similar finds at other sites, from the Tun-huang

[15] See below, p. 435.

[16] Cf. *Man*, xi. 3. No. 24.

Limes to Farhād Bēg-yailaki, furnish as to this primitive method of fire-production having prevailed, during the early centuries of our era, all along the line of Chinese advance westwards.[17]

Fenced enclosures.

Immediately to the south-west of L.A. v could be traced a fence made of tamarisk rushes marking a rectangular enclosure about forty feet across. Beyond it were several smaller fenced spaces, probably meant for horses or cattle, and adjoining the remains of some modest quarters, L.A. vi (Plate 25), roughly built with rush walls. In the small rooms, i, the wind had scooped the ground clear in the centre; yet light sand lay in the corners, and in the one to the south-west there survived a solitary rectangular covering-tablet, bleached and splintered. The mud plaster of the walls had completely disappeared, and little was left of their wooden framework.

Section III.—DISCOVERIES IN AN ANCIENT REFUSE-HEAP, L.A. vi. ii.

Rich mine of Chinese records.

Far more interesting than the small dwellings last described was the rich mine which we struck in the big rubbish-heap, L.A. vi. ii, extending eastwards from L.A. vi to the extreme western portion of the 'Ya-mên', where it joined the previously searched area L.A. iii. i. It measured over a hundred feet across, with a width of about fifty feet (see Plate 25). Fig. 100 shows it in the course of clearing. On the south, to a height of from four to five feet gradually diminishing northward, lay a mass of consolidated rubbish consisting mainly of reed straw and stable refuse including abundant droppings of horses, donkeys, and camels, and to a smaller extent also of sheep. As soon as excavation of this unsavoury quarry had commenced from the south, Chinese records on wood and paper, together with other small relics, cropped up in numbers. Most of them were recovered from layers two or three feet above the ground level and thus close to the present surface. Evidently the sweepings from the quarters and offices close by had been thrown down here on earlier accumulations of stable litter. Does the comparative rarity of records in the latter indicate a period when the ruined station served as a halting-place on the ancient trade route, but had ceased for a time to be a place of much official activity? Our present knowledge of local history in this region is too imperfect to permit of any definite answer. But it is certainly curious that the dated records on wood from this deposit of refuse (see *Doc.* Nos. 721–28, 731, 733, 735–36) are contained within the narrow chronological range of A.D. 264–70, to which two fragmentary documents on paper (*Doc.* Nos. 910, 912) add the date A.D. 312.

Refuse resists wind-erosion.

The careful clearing of these accumulations of dirt kept us busy for the best part of two days. The odours were still pungent and, combined with the icy north-east wind which was constantly driving fine particles impregnated with ammonia into eyes and throat, made the task very trying. It was impossible to remove the refuse altogether, and after being turned over and searched, it had to be left *in situ*. In this process the rubbish-heap had naturally lost its quasi-consolidated condition. It was hence of special interest to me to find it, on my second visit in February, 1914, practically undiminished and scarcely disturbed on the surface, in spite of all the gales and sand which had driven across it during the seven intervening years. This strikingly illustrates the wind-resisting capacity of such refuse, especially when containing a thick admixture of straw, which has protected from erosion, at so many of the ancient sites that I explored,[1] valuable antiquarian relics.

Condition of wooden Chinese 'slips'.

In proportion to the extent of this refuse-heap was the abundance of interesting finds which rewarded its clearing. Among them the most numerous class are the Chinese records on wood and paper. Of the former I counted on the spot about 170, of which 121 are published in M. Chavannes' *Documents*, the rest being small fragments or undecipherable for one reason or

[17] See above, pp. 233 sq.

[1] Cf., e.g., *Ancient Khotan*, i. pp. 343 sq., 479; above, pp. 205, 276.

another.[2] The vast majority of them are written on wooden slips of the regular size and shape, measuring, when complete, between $9\frac{1}{4}$ and $9\frac{1}{2}$ inches in length and three-eighths and half of an inch in width (see *Doc.* Plates XXII–XXVII). A considerable proportion of them show signs of having been broken, probably on purpose like torn 'waste papers', or burnt at one end when they had been used as 'spills' to light fires.[3]

Inscribed lids of letter cases.

A wooden document of special antiquarian interest is the well-preserved rectangular tablet L.A. VI. ii. 0200 (*Doc.* No. 751, Plate XXIII), measuring $3\frac{3}{16}$ by $1\frac{1}{2}$ inches, which is inscribed 'to Mr. Chang, the *chang-chih* of the Western Countries', the name of the sender below, and that of the person entrusted with the delivery above. This inscription on the obverse and the sunk rim on the back of the tablet conclusively prove that it once served as lid to a small box containing an official letter. The obverse shows in its centre a socket, now empty, for a clay seal, and three transverse string-grooves, exactly like the covering-tablets of Kharoṣṭhī rectangular documents in wood. Another smaller tablet of a similar type, L.A. VI. ii. 09 (*Doc.* No. 773, Plate XXIV), has two string-grooves and the socket still filled with clay, though the seal impression is no longer recognizable. The writing on the obverse describes the content of the small box to which this little tablet must have formed the lid as a 'private letter' from a certain Chao A-chung. There is further a pair of small inscribed tablets of a shape closely corresponding, L.A. VI. ii. 0141 and 0173 (*Doc.* No. 868), in which M. Chavannes recognizes the lid and the bottom of a box once containing a letter, though the writing of the inscription is so very cursive that it cannot be deciphered.

Receptacles for letters on wood.

But the two first-named tablets amply sufficed to assure me on the spot that I had been right when, years before, I conjecturally assumed 'that the ingenious methods of fastening and authentication which are so amply illustrated by our Kharoṣṭhī documents on wood', first brought to light in 1901 at the Niya Site, 'were originally derived from China'.[4] Subsequent finds of far earlier Chinese 'stationery' on wood have fully confirmed this. The only rectangular covering-tablet with a Chinese inscription found in 1901, N. XV. 345,[5] had also been marked as a lid by the sunk rim and raised central portion of the reverse. From the width of the latter, about one inch, I had concluded that 'a set of slips of the usual width could just have been inserted vertically into the receptacle'. With this explanation the widths shown by the raised central portion of the back of L.A. VI. ii. 0200 and by the flat back of L.A. VI. ii. 09, *viz.* $1\frac{1}{3}$ and $\frac{3}{4}$ inch respectively, fully agree. The latter lid-tablet and also L.A. VI. ii. 0141 (*Doc.* No. 868), which is just an inch wide, probably rested on a rim sunk into the thickness of the boards forming the sides of the box intended to receive the inscribed slips of wood.[6] In each case the width left inside the box just sufficed for the insertion of a set of slips, the regular size of these not exceeding three-quarters of an inch.

Chinese paper documents.

To the Chinese records on wood from L.A. VI. ii must be added close on threescore fragments of Chinese paper documents, of which nineteen were sufficiently large and legible to be included in M. Chavannes' publication.[7] The greater proportion of fragments which could not be utilized is probably due to the more thorough way in which these real 'waste papers' could be torn up and destroyed. The paper material was undoubtedly brought from China, and this may explain why at the Niya Site, so much further away to the west and not on the main trade route, ruined

[2] Cf. Chavannes, *Documents*, Nos. 721–28, 730–36, 743–80, 782, 785, 786, 788–813, 833–77.

[3] Cf. *Ancient Khotan*, i. p. 343.

[4] Cf. *ibid.*, i. p. 361.

[5] See *ibid.*, ii. Pl. CXIV and i. p. 361, note 17.

[6] For references to early Chinese texts mentioning such boxes for the reception of slips of wood, see Chavannes, *Les livres chinois*, in *Journal Asiat.*, 1905, janvier–février, p. 63.

[7] See Chavannes, *Documents*, Nos. 910–26, 928, 929.

dwellings and refuse-heaps of approximately the same period did not yield the smallest fragment of paper. Even at the Lou-lan Site some inference may, perhaps, be drawn as to the comparative rarity of paper from the fact that in several instances the reverse of papers bears writing by a different hand and, in one case at least, of an official character.[8]

Kharoṣṭhī records on wood, paper, silk.

In striking contrast with the abundance of Chinese records is the small number of Kharoṣṭhī documents which have found their way into this general deposit of refuse. This disproportion seems to me quite consistent with the prominently Chinese character of the station represented by the L.A. ruins and of the traffic and administrative activity which it served. Besides four fragmentary tablets and three small torn pieces of paper with Kharoṣṭhī script (L.A. vi. ii. 0102, 0103, 0236, Plate XXXVIII) there was found the large and almost complete paper document L.A. vi. ii. 0234 (Plate XXXIX). In shape and in the arrangement of the writing it closely resembles the Kharoṣṭhī documents on leather which another precious refuse-heap, N. xv, had yielded at the Niya Site.[9] A novelty is presented by a strip of fine undyed silk, L.A. vi. ii. 0235 (Plate XXXIX), inscribed with two lines of Kharoṣṭhī. It has furnished the first tangible confirmation of the Chinese antiquarian tradition that silk was one of the ancient writing materials used before the invention of paper, about A.D. 105.[10] The material in this case, too, just as in that of the Kharoṣṭhī documents on paper, must have come from China. It deserves notice, therefore, that the other records on silk which I subsequently discovered, two of them in Kharoṣṭhī and Brāhmī respectively, came from ruined watch-stations along that very route which the ancient Chinese silk trade had followed through the desert west of Tun-huang.[11] The fragment L.A. vi. ii. 059 (*Doc.* No. 918, Plate XXVIII) is of some interest because the torn piece of paper bears on one side remains of a Chinese epistle written at Tun-huang, and on the other three lines in Kharoṣṭhī.

Fragment of Early Sogdian document.

Glad as I was of these plentiful manuscript remains, which confirmed or expanded previously gained archaeological knowledge, I was at the time even more interested in a small torn scrap of paper, L.A. vi. ii. 0104 (Plate CLIII), which raised a fresh problem. Barely 4½ inches long with a maximum width of two inches, it retained small portions of four lines in what was a truly 'unknown' writing. It manifestly ran from right to left, and some of the characters distantly recalled Aramaic. It was obvious that no decipherment could be hoped for from so tiny a fragment. Yet this did not prevent my thoughts from instinctively connecting this script of clearly Western look with people from ancient Sogdiana, or even more distant Iranian lands, who might have followed this early high road to the country of the silk-weaving Seres. I could not foresee then that a lucky discovery, made four months later in a ruined watch-station at the eastern end of this ancient desert route, would put into my hands quite a number of complete documents in the same script. Still less did I imagine that their subsequent partial decipherment by the philological penetration of that lamented Iranian scholar, M. Robert Gauthiot, would prove them to be in Early Sogdian writing and language.[12]

Miscellaneous remains among refuse.

That all these multifarious records had found their way to the large refuse-heap as sweepings from the neighbouring quarters and offices was made plain by the plentiful remnants of worn-out articles of clothing, furniture, and implements of all sorts which were mixed up with them in the layers of rubbish. A reference to the descriptive list below will show the variety of the miscellaneous relics recovered from L.A. vi. ii.[13] More vividly perhaps than anything else, they

[8] Cf. *Documents*, Nos. 910, 915, 920, 925, 926, 928. The last is a large and interesting document to which reference will be made below.

[9] Cf. *Ancient Khotan*, i. p. 345, ii. Pl. XCI–XCIII.

[10] Cf. Chavannes, *Les livres chinois*, in *Journal Asiat.*, 1905, janvier–février, pp. 8 sqq. (quoted from reprint).

[11] For Kharoṣṭhī and Brāhmī writings on silk, see below, chap. XVIII. sec. iii; XIX. v; for Chinese documents on silk, chap. XVIII. sec. v.

[12] Cf. below, chap. XVIII. sec. iv.

[13] See below, sec. xii.

brought home to me the petty realities of the life led at this modest Chinese station. But a brief summary of the more instructive classes of objects must suffice here.

Pottery and bronze fragments.

The special value of all specimens found in L.A. vi. ii lies in the fact that, owing to the presence in the same layer of written records ranging over a somewhat brief period, they can be accurately dated. The importance of this fact is particularly obvious in the case of such remains as pottery and small objects in metal which, owing to their hard substance, could also be picked up in great numbers from the surface of wind-eroded ground, but which, found in this way, necessarily lack chronological determination. Thus fragments of pottery, simply ornamented, such as L.A. vi. ii. i. 001. b, 002, which Plate XXXVI illustrates, acquire an archaeological value beyond their intrinsic interest. Pieces of pottery in hard black or dark-grey clay, covered with close parallel ribbing, i.e. 'mat-marked', like L.A. vi. ii. 004 (Plate XXXVI), 0024, closely resemble the type of pottery most common at the ruined watch-stations of Han times along the ancient Limes west and north of Tun-huang, and may, together with fragments like L.A. 00146, L.B. iv. ii–v. 006 (Plate XXXVI), have belonged to pots actually brought from there. Among small objects in bronze, the terminal ending in a lioness' head, L.A. vi. 001 (Plate XXXVI), and the fragment of an open-work moulded ornament, L.A. vi. ii. 0012 (Plate XXIX), may be specially mentioned. The prevalence of bronze loops and strap rings, probably from harness, over iron ones (L.A. vi. ii. 008) is significant.

Remains of implements, sandals, etc.

Among objects in wood, the leg of a piece of furniture, L.A. vi. 002 (Plate XXXV), the spoons, L.A. vi. ii. 0017, 0018, 0058, spatulas, L.A. vi. ii. 0040 (Plate XXXV), 0052, 0057, and seal cases, L.A. vi. ii. 0019, 0020, closely resembling those found at the Niya Site, may be singled out for mention. Lacquered work is represented by a fragment from the rim of a vessel, L.A. vi. ii. 001. a, painted dark red inside and, no doubt, brought from China. It is also possible that the much-worn string-sandal, L.A. vi. ii. 0025 (Plate XXXVII), the curious technique of which has been fully explained in the descriptive list, had come to its final rest in this refuse-heap on a foot which had tramped the long desert marches from Tun-huang; for its make agrees closely with that of numerous cast sandals of hemp string which turned up at ruined watch-stations of the Tun-huang Limes, and which seem to represent the usual foot-gear of Chinese soldiers of Han times. But I must point out that I found a sandal of similar type at one of the ruined dwellings of Dandān-oilik, and that in this case date and place make local origin more probable.[14] In the leather shoes, L.A. vi. ii. 0030. a, b, 0031, we may safely recognize indigenous products. In the last specimen the purple colouring of the leather is curious to note as this is still the favourite colour for the modern *chāruk* or boots in most oases of the Tārīm Basin.[15]

Fabrics in silk, wool, horse-hair, etc.

Among the abundant remains of fabrics (L.A. vi. ii. 0027, 0028, 0035–38) woollen and silk materials of varied colouring prevail, but hemp and felt are also represented. The small fragment of a fine figured silk, L.A. vi. ii. 0045. b (Plate CXI), shows remarkably rich design and very delicate weaving. Another interesting piece is the well-preserved fragment of a woollen pile carpet, L.A. vi. ii. 0046 (Plate XXXVII), showing peculiar details of weaving (see descriptive list) which make it resemble in technique the modern Japanese rug, just like the previously noticed carpet fragment L.A. i. ii. 001. A material peculiar to the Lou-lan region is the carefully woven horse-hair gauze, L.A. vi. ii. 0043 (Plate XXXVII), 0060, of which the latter fragments seem to have belonged to a sieve. The net of hemp string, L.A. vi. ii. 0034, with its wide meshes cannot have served for fishing (as one might have expected if the ancient station had really been situated close to a lake according to Dr. Hedin's supposition), but was evidently intended for netting game. Fish

[14] Cf. *Ancient Khotan*, i. p. 297 (D.v. 11).

[15] A red mocassin of the *chāruk* type appears on the leg of the lower mounted figure in the painted panel D. vii. 5 of Dandān-oilik; cf. *Ancient Khotan*, i. pp. 278, 298; ii. Pl. LIX.

bones, however, were plentiful in the refuse, just as bones of sheep, donkeys, and camels. The absence of straw from wheat and other cereals in the midst of the masses of reed straw was curious, pointing to the fact that the cultivated area which supplied food for men and fodder for animals must have been at some distance. Grains of millet (the present *tārīgh*, Panicum miliaceum), L.A. vi. 003, were, however, found, and a subsequent close examination of the wall plaster in L.A. ii. vi revealed the presence of wheat straw in it.

Dating of coins found at L.A. vi. ii.

Before concluding the account of the finds made in L.A. vi. ii, I may briefly refer to the numismatic evidence which it furnishes. It has its special interest on account of the certainty with which the numerous finds of dated Chinese documents, as mentioned above,[16] allow us to attribute the accumulation of the refuse deposits between the structures of L.A. iii, v, and vi in the main to the second half of the third and the early decades of the fourth century A.D. Among the nineteen Chinese copper coins found at L.A. v and L.A. vi there are seven *Wu-chu* pieces or fragments of such, one Ho-ch'üan coin, and eleven much-clipped pieces of a type illustrated by Nos. 29–34 in Plate CXL.[16a] The proportion between the full *Wu-chu* and these small pieces, clipped down often to quite diminutive sizes, is not materially altered if we include the coins found at L.A. iii and iv, the totals being then raised to twelve and nineteen respectively. We have here clear archaeological evidence proving that such clipped pieces must already have been extensively in circulation during the latter half of the third century A.D., and that the view which would attribute the introduction of these thin coins, known to Chinese numismatics under the graphic term of 'goose's eyes', to the short-lived reign of Fei-ti, A.D. 465, and his successors of the Sung dynasty, is misleading.[17] There seems good reason to believe that Chinese numismatists, too, are cognizant of these much-clipped pieces going back at least to the reign of Hsien-ti, the last emperor of the Later Han dynasty, A.D. 189–220.[18] In reality the process of constant debasement to which this quasi-subsidiary currency owes its origin is likely to have set in far earlier.

Section IV.—REMAINS OF A WALLED ENCLOSURE

Remaining ruined dwellings.

The clearing of the other structural remains which had survived within the ancient station was effected with ease on December 22. They proved unfortunately scanty, owing to the terrible havoc worked by wind-erosion, which in several places, e.g. to the north and north-west of L.A. vi, had left nothing but big pieces of timber débris scattered over the slopes of bare Yārdangs to mark the position once occupied by substantial dwellings. At a distance of about a hundred yards to the south of the 'Ya-mên', a group of small quarters, L.A. vii (see Plates 23, 24), still showed its walls, built with vertical tamarisk rushes, to a height of two or three feet. Within these walls and the adjoining fences, which the same pliable material has saved from erosion, light drift-sand had accumulated over the original ground. But besides some small metal fragments, including a fairly well preserved ear-ring, L.A. vii. 002. e (Plate XXIX), and a hollow Toghrak trunk probably once used for storing grain, there was found here only an oblong Kharoṣṭhī tablet, L.A. vii. i. 1. An almost completely destroyed structure, on a terrace rising about twenty-six feet above the adjoining eroded depression, yielded only three *Wu-chu* coins, a wooden comb, and a few miscellaneous fragments in lacquered wood and metal.

Ruin L.A. ix.

The ruin L.A. ix, seen in Figs. 92, 95, lay within about forty yards of the Stūpa, and furnished a striking illustration of the physical factors at work here. Of the substantial dwelling which, as the heavy foundation beams seen in Fig. 92 on the north slope of the isolated terrace show, had

[16] Cf. above, p. 381.
[16a] See Appendix *B*.
[17] See T. de Lacouperie, *Catalogue of Chinese coins in the British Museum*, p. 418.
[18] Cf. *ibid.*, p. 399.

once stood here, there survived only small remnants of the timber and wattle walls at the point where four rooms met. Even these would probably have disappeared under the ceaseless attack of erosion if the tangled mass, long dead, of tamarisk growth, seen in Fig. 95 before clearing, had not afforded protection. These tamarisks must have grown up after the abandonment of the site and during a period when water still reached the vicinity of the ruins. A much later temporary return of water to the site is attested by the small tamarisk shrub, also dead but of relatively recent appearance, which, in Fig. 95, is seen on deeply eroded ground at the foot of the terrace bearing the remains. Dead tamarisk growth of this later date was also found in wind-scoured depressions near L.A. I and south of L.A. II, as shown by the photographs in Figs. 93 and 102. Temporary as this return of water to the vicinity of the ruins must have been, its effect lasted sufficiently long to permit of the formation of small rudimentary tamarisk-cones such as are seen in Fig. 102. Near L.A. II I observed, in fact, that part of the tamarisk scrub on a single one of these little cones was still living.

Tamarisk growth dead.

It was of interest to note that of the four walls meeting in the small extant portion of the ruin, one showed wattle formed of diagonal tamarisk matting just as was found in most of the better built dwellings of the Niya Site,[1] another of horizontal reed bundles, and the rest of vertically-placed tamarisk rushes. This proves that these three methods of wall construction were practised simultaneously at the site. The thickness of the walls when plastered seems to have averaged about 6–8 inches. The corner of the room to the south-west had retained a small layer of refuse, and in this was found the large oblong tablet, L.A. IX. i. 1 (Plate XXXVIII), showing on both sides columns of Kharoṣṭhī writing, evidently lists or accounts. On the eroded ground between and near L.A. VIII and IX finds of coins and small objects in stone, metal, and glass were particularly numerous, and it has since occurred to me that they might possibly have been due to the fact that the entrance through the north-eastern gate of the station passed over this ground. Among these finds may be mentioned the lignite seal L.A. VIII–IX. 001 (Plate XXIX), an iron arrow-head, L.A. VIII–IX. 008 (Plate XXIX), and a number of glass and stone beads, L.A. VIII–IX. 0017–20, 0025.

Various methods of wattle.

Small objects in stone, metal, etc.

While the clearing of the ruins at L.A. II and III was proceeding, my attention had already been attracted by the curiously straight line of what looked like a long and narrow terrace rising above the eroded ground to the south of the ruins. On examining the top of the terrace, which was fairly level, I soon realized that it bore the much-decayed remnants of a rampart built of stamped clay with intervening layers of tamarisk brushwood. They showed here a maximum thickness of five feet or so, and still rose in places to a height of four and a half feet. The longest more or less continuous stretch which I was able definitely to trace on this side measured about 260 feet, and its bearing, on subsequent careful observation, proved to be N. 65° E. to S. 245° W., i.e. identical with the prevailing wind direction. Another smaller remnant, about fifty feet long and traceable just south of L.A. VII, fell exactly in the continuation of this line. These scanty remains of an enclosing wall —for as such I could recognize them without doubt—ran along the top of a narrow terrace covered with an unusual quantity of pottery débris which had helped to protect it from erosion. Built against the eastern end of the remnant of the main wall I found the badly-eroded traces of a small structure of timber and tamarisk wattle ; but otherwise the rampart ran clear of buildings.

Remnants of eroded rampart.

Guided by the indication here given I soon discovered corresponding segments of the wall, shorter but equally distinct in bearing and construction, forming an exactly parallel line on a terrace north of the main group of ruins. The longer one, badly decayed, could be traced for about 140 feet, and beyond it to the W.S.W. another for about thirty. The latter, less injured, still rose to some eight feet above the original level of the ground, and showed clearly two successive layers of

Segments of north wall traced.

[1] See above, p. 215; *Ancient Khotan*, i. pp. 317, 333, etc.

tamarisk bundles embedded in the wall of stamped clay at intervals of about two feet. Beyond this section, the line of the wall could still be made out in places by tamarisk bundles which had once served as its foundation and now survived on the top of small Yārdangs. The original thickness of the wall could not be determined with any certainty, as it was evident that its sides had everywhere suffered much from the paring effect of the sand driven along it. The subsequent plane-table survey of the site showed the distance between the north and south walls I had thus traced to be approximately 1,020 feet.

Difficulty of tracing east and west walls.

It was a more difficult task to ascertain the position of the west and east walls, which obviously must have once completed the defences of the small fortified station. Among the close-set Yārdangs which furrowed the ground everywhere immediately beyond the area occupied by ruins I looked in vain for any sign of a continuous line suggesting a wall. The time I could then spare from other pressing tasks was too limited to permit of a prolonged examination of the problem, and as the Surveyor was again *hors de combat* with rheumatic pains, which exposure to the bitter cold and the constant cutting wind had increased—on December 22 the minimum thermometer showed 46 degrees Fahr. below freezing-point—I was deprived of such guidance as a large-scale plan made with the plane-table might have furnished.[2] It was owing to these difficulties that I failed altogether at that time to discover the true position of the east, or to be more precise east-north-east, wall, and that the two small segments of the west (*recte* west-south-west) wall which I actually did notice I first erroneously interpreted as remains of two projecting towers which might have flanked the western gate of the little station.[3]

Position of west gate traced.

In reality these two clay mounds close to L.A. IV, as my fresh survey in 1914 clearly showed, fall exactly into the line of the west wall, running N. 330° W. to S. 150° E. The southern one is about twenty-four feet long, and shows at its base a thickness of about fifteen feet. It rises steeply to about sixteen feet above the eroded ground level; but it was impossible to determine how much of this height belongs to the superstructure and how much is merely the result of the lowering of the ground through wind-erosion. To the north, beyond a gap of some thirty yards, rises a second and smaller segment of the wall, about fifteen feet long and nine feet thick. Its height is about nine feet, and on its top two layers of tamarisk bundles could still be made out, separated by about three feet of stamped clay. The survival here of these small remnants of the wall is easily accounted for by the protection which the ruined dwellings, L.A. IV–VI, closely adjoining must have given. The ground between the two segments is strewn with heavy timber débris, and as our surveys of both 1906 and 1914 show this gap to be exactly in the middle of the west wall, we may, I think, safely assume that the western gate of the fortified station stood here. I found closely corresponding examples of large gateways, built with heavy timber, in the ancient fort of Kara-dong on the lower course of the Keriya River[4] and in the fort L.K. explored in 1914 on my way to the Lou-lan Site.[5]

East face of circumvallation.

Of that portion of the circumvallation which had faced east-north-east I had been unable in 1906 to discover any trace. So I was forced to the conclusion that the constant scouring of that terrible east-north-east wind, which, as our experience showed, does not cease completely even in the winter, and of the sand it drives before it, must have first breached this wall face directly obstructing its way at every point marked by a Yārdang trench, and ultimately broken down and

[2] The site plan of the L.A. station, reproduced in Pl. 23, has been prepared from a fresh survey of the site carefully executed in 1914 by Miān Afrāzgul under my supervision. The details of particular structures shown in it have been inserted from the plans made in 1906.

[3] See *Desert Cathay*, i. p. 388.

[4] Cf. *Ancient Khotan*, i. pp. 447 sq., Fig. 53; ii. Pl. XXXVIII.

[5] Cf. my *Third Central-Asian Expedition*, *Geogr. Journal*, 1916, xlviii. p. 121.

carried off any fragments of the rampart that had previously survived on the tops of the erosion terraces. Puzzling as the result seemed at the time, I could not doubt the correctness of this explanation after the badly breached eastern walls of the ruined Chinese towns about An-hsi, surveyed half a year later and to be described below,[6] had revealed to me the intermediate stages of the process.

Remnants of east wall discovered.

My visit to the site in February, 1914, has enabled me to verify the above explanation by the discovery of two small surviving remnants of the east-north-east wall which had previously escaped my notice, and thereby also to determine the exact shape and extent of the ancient circumvallation. Curiously enough, the photograph reproduced in Fig. 93, which was taken from the base of the ruined Stūpa above L.A. I on the first day of my stay in December, 1906, shows the position of these fragments of the wall which subsequently, when looking about on the lower level of the eroded ground, I had failed to recognize.[6a] The northern segment, seen in Fig. 93 near the centre of the view, is marked by a thick layer of tamarisk branches, about ten feet wide, covering the top of a terrace for about eighty feet. These tamarisk fascines of the wall foundation—for such they were in fact—are carefully laid, here as elsewhere, at right angles across the direction of the wall. The top of the terrace, which this thick layer of tamarisk brushwood has helped to preserve from erosion, now rises fully sixteen feet above the eroded ground eastwards. To the north, the wall once continuing this segment has completely disappeared through wind-erosion, as is shown by the photograph in Fig. 92 extending the panoramic view to the east of the Stūpa. But, about 220 feet further south, there survives another segment of this wall face in the shape of a smaller terrace bearing on its top a similar layer of tamarisk fascines about twenty-four feet long. This terrace, too, which rises quite close to what must have been the south-east corner of the walled enclosure, is visible in Fig. 93. The two segments were found by careful observation with prismatic compass to lie in the direction N. 330° W. to S. 150° E., and thus on a line almost exactly at right angles to the previously determined south and north walls. A mass of heavy timber débris, lying on completely eroded ground about eighty feet to the north of the first segment and just on the above line, may well represent the last remains of the east gate of the ancient station.

Square shape of circumvallation.

The determination of the eastern wall face made it possible in 1914 to complete a survey of the whole circumvallation. It was thus proved that the walled enclosure formed an almost exact square of about 1,020 feet inside. This square shape is the typical one found in most Chinese walled towns or *ch'êng* to the present day, as subsequent observation showed me in the case of the many fortified towns and villages, both old and modern, which I passed on my journey through north-western Kan-su. That this shape is of early origin is certain; but how far back its orthodox use dates I must leave to Sinologue antiquarians to determine. The correct orientation of the walls towards the cardinal points of the compass which I ordinarily observed in these *ch'êng* has, no doubt, its reason in Chinese traditional lore, and this gives special significance to the different position adopted at L.A. for the walls of the old Chinese station. We have seen that in the latter the clearly traceable 'south' and 'north' walls followed exactly the direction of the prevailing east-north-east wind, to which fact they owe their relative preservation, and that the other two wall faces lay straight across this wind direction. It is impossible not to recognize here an intentional adaptation of the traditional scheme to the need of protection from the prevailing wind, which for long geological ages before the dawn of historical times must have been the same determinant factor in the atmospheric conditions of the Lop region that it now is. We have already observed the same special orientation in the case of individual structures on the site, and cannot possibly doubt that the reason determining it was identical.

Orientation of walls adapted to wind direction.

[6] See below, chap. XXVI. sec. ii.

[6a] For a similar experience, cf. below, chap. XVII. sec. i.

Section V.—THE RUINED STŪPAS OF L.A.

Of structures within the walled station there remains to be described only the ruined Stūpa L.A. x near its north-east corner (Fig. 96). It stands on the top of an isolated clay terrace round which wind-erosion has lowered the ground level to a depth of about eighteen feet in places, and this position, added to its surviving height of about thirty-three feet, makes the ruin the most conspicuous feature of the whole site (see Figs. 94, 95). That it was a Stūpa and not a watch-tower, as supposed by its first discoverer, could clearly be recognized at a glance by any one familiar with such ruins.[1] But the exact measurement of the building, implying a reconstruction of its original features, was no easy task, owing to the havoc caused by erosion and even more by the hand of man, the latter including earlier burrowings of treasure-seekers and the digging operations of Dr. Hedin's labourers.[2] However, a careful examination of the ruin, especially on the south-west, where the damage done had been less thorough, allowed me in the end to determine the essential dimensions and architectural details (see Plate 26).

Position of Stūpa within station.

The Stūpa possessed all the main features I had observed in the Stūpas examined during my first expedition. As the origin and character of these features have already been fully discussed in *Ancient Khotan*, no detailed explanations regarding them are here needed.[3] The L.A. Stūpa, too, shows the orthodox arrangement of a square base rising in three stories and surmounted by a cylindrical dome resting on a drum. The lowest of these stories is only one foot high and rests on a foundation of tamarisk fascines, as seen in Fig. 96 below the man on the left. At the foot of this story a course of bricks, lying on the natural ground and forming a kind of plinth, could be traced for about six feet near the south-west corner. The second story, set back four feet, shows a height of three feet. Above this rises the third story to a height of twelve feet six inches. It seemed to have been approached by a double flight of steps about a foot broad, cut into its south face. But the exact arrangement of these stairs, and of those which apparently gave access to the top of the second story, as traced at the south-west corner, could not be made out with full certainty. The top of the third story is marked in Fig. 96 by the man on the right. The dimensions of the successive stories are about fifty-one, forty-four, and thirty-three feet square respectively.

Structural features of Stūpa.

Above the third story of the base proper rose an octagonal drum, seven feet high, with a circular plinth one and a half feet high on its top. On this again rested the cylindrical dome, badly broken and standing only to about seven feet in height even on the best-preserved south-west side. Its diameter appears to have measured about twenty-one feet. Two thick strata of tamarisk bundles were embedded in the masonry of the octagonal drum, and can be made out in Fig. 96. The burrowings effected in the dome and drum by Dr. Hedin's men and earlier treasure-seekers have laid bare portions of the massive timber framework, consisting both of beams and stanchions, which had been inserted into the drum and dome to reinforce the masonry. Curved beams were exposed, owing to the disappearance of the original plaster covering, where the dome springs from the circular plinth. The stories of the base appear to have been built separately, one outside the other, as concentric squares, after a method observed also elsewhere among Turkestān Stūpas.[4] Thus at the north-east corner, where wind-erosion had exposed the inner masonry, the plastered

Drum and dome of Stūpa.

[1] Cf. Hedin, *Central Asia*, ii. pp. 637 sqq., Pl. 64, 69, where the excellent photographs suffice to discount whatever doubts a long and inconclusive discussion of details, having no bearing on the archaeological facts, might otherwise raise as to the character of the ruin.

[2] Cf. regarding these operations, which included the sinking of a well in the centre and the pulling down of a portion of the drum on the east, Hedin, *Central Asia and Tibet*, ii. pp. 118 sq.; also *Central Asia*, ii. p. 638.

[3] Cf. *Ancient Khotan*, i. pp. 81 sqq., 339 sq., etc.

[4] Cf. *ibid.*, p. 339, for evidence of similar construction at the Niya Site Stūpa.

outside surface of the third base was visible behind the brickwork of the second. Whether the dome had contained a central shaft or chamber could no longer be ascertained, owing to extensive havoc wrought in this portion of the Stūpa. The sun-dried bricks used throughout were fairly hard, and showed the same dimensions as observed in L.A. II, viz. 18″ × 12″ × 4″. Their slightly reddish appearance in places can be explained by a conflagration which may at one time have destroyed structures at the foot of the Stūpa, and by bonfires lit on its top after the shrine had fallen into ruin. The orientation of the sides of the base agreed with that of the walled enclosure and of the ruined dwellings within it. The terms 'south face', 'north-east corner', etc., applied above, are therefore not quite exact, and have been used merely for sake of convenient brevity.

Changes undergone by surface.

An observation made on the ground adjoining the Stūpa may find mention here, as it serves to illustrate the vicissitudes which the surface of the soil must have undergone since the occupation of the site ceased. On the north slope of the erosion terrace which the Stūpa occupies I found a thick layer of dead tamarisk brushwood which once had grown up here covering a piece of worked timber undoubtedly fallen from the ruin above. The position occupied by this dead tamarisk growth was six feet below the original level of the ground as marked by the already mentioned foundation of tamarisk fascines beneath the Stūpa base. It is obvious that wind-erosion must, after the abandonment of the site, have lowered the ground level to this depth before a temporary return of moisture permitted tamarisk scrub and the like to grow up again.

Varying factors affect surface levels.

In full agreement herewith I found that wherever the tops of Yārdang ridges near the Stūpa bore dead tamarisks with the roots still embedded in the soil, their surface lay five to six feet below the original ground level as marked by the Stūpa foundations.[5] I noticed the same difference of level also elsewhere, e.g. south of the enclosing wall of the station, where the Yārdang tops bearing dead tamarisks showed a level six feet lower than that on which the wall had been built. It clearly follows that the process of denudation and erosion, since the site was abandoned some time in the fourth century A.D., has not been a continuous one, and further that no safe conclusions can be drawn from the results of any measurement of levels over wind-eroded ground, such as that crossed by Dr. Hedin's line of levels south of the L.A. site, as far as the configuration of the ground during earlier periods is concerned. As the process of erosion is neither constant in its progress nor necessarily uniform over the whole area, only structural remains of an archaeologically datable character can furnish reliable indications as to the levels which the surface of the soil may have occupied at particular historical periods. It has appeared desirable to emphasize this limitation of our knowledge of earlier surface levels in view of a theory which, merely on the basis of a single line of measured levels, has assumed the ruined station L.A. to have stood on the actual shore of 'the ancient Lop-nōr'.[6]

Ruined Stūpa L.A. XI.

The nearest and most conspicuous of the structural remains traced outside the walled station was the large ruined mound built of sun-dried bricks, L.A. XI (Fig. 98), and situated about 400 yards east-south-east of the Stūpa. It occupies the top of a wind-eroded terrace; south of it the soil has been scooped out to a depth of some fifteen feet, as seen in Fig. 98. Close examination showed that the mound represents the remains of a Stūpa of which the cylindrical or dome portion has been completely destroyed, human agency probably aiding the erosive force of the winds. The base appears to have been orientated like that of the Stūpa within the station, but owing to the far-advanced decay of the outer masonry the sides could not be established with full precision. Judging from the north face, which has suffered less than the rest, the base may have formed a square of about 43–44 feet on the ground. No arrangement in stories could be made out. But

[5] Such tamarisk growth on a Yārdang top is seen in Fig. 98 on the left of the foreground.

[6] Cf. Hedin, *Central Asia*, ii. p. 635 and passim.

beneath the lowest course of brickwork the foundation was clearly recognizable (marked in Fig. 98 by the feet of the man standing lower down). It consisted of two layers of tamarisk fascines, six inches thick, separated by a layer of stamped clay, three inches thick. The height of the extant masonry at the NE. corner was about nine feet, and about thirteen feet near the centre. As in L.A. x, the Stūpa base appears to have been built in concentric squares corresponding to successive stories, and both near the NW. corner and in the big cutting found near the SE. one clefts between two cores of brickwork were noticed. The bricks used showed slightly varying sizes, the prevailing one being 18" × 12" × 4", as in L.A. II and x.

Burrowing of treasure-seekers.

That treasure-seekers had correctly recognized the character of the ruin and made an endeavour, in a competent fashion, to reach the presumed relic deposit in the centre of the base was proved by a gallery about five feet wide and six feet high which had been cut into the base from the middle of the west face. It ran straight towards the centre, and as it was found on my second visit, when cleared of the heavy sand filling it, to be fully twenty-six feet long, it is likely to have reached the deposit—if there was one. The fact that this gallery contained plentiful remains of birds' nests proves that it must have been dug into the ruin when animal life could still find sustenance in this region.

Ruined mound NE. of station.

On the second day of my stay I had taken occasion to inspect the other structural remains which could be sighted in the vicinity of the ruined station (see Plate 22). About half a mile to the north-east, I found a small mound marking the position of a completely decayed structure of hard brick, evidently fired, which erosion had reduced to a pyramidal shape (Fig. 88). It appeared to be the ruin of a Stūpa base measuring at its foot about thirty-five feet on the side facing N.N.W., which could best be traced. The actual height of the top of the mound was about ten feet from the lowest brick course. The bricks laid bare were seventeen inches square with a thickness of three inches. The ground close to the terrace bearing the mound had been scooped out to a depth of sixteen feet, and showed but scanty pottery débris.

Mound marking ruined shrine (?).

Going due north from this mound across ground frightfully scoured with Yārdangs and trenches for about one and three-quarter miles, I reached another badly broken mound on a terrace rising about sixteen feet above the eroded depression close by. The solid mass of sun-dried bricks had completely lost its original outlines through erosion, except on the west, where a face of about thirty-six feet could be measured. Above a lower story or base, about eight feet high, there rose a smaller mass of broken brickwork, about twenty feet wide and seven feet high, occupying the northern portion of the base. Though the surface features had everywhere been completely effaced, yet I thought that I could recognize a resemblance in the original plan to the ruined shrine M. II at Mīrān, which will be described below.[7] The upper portion of the mound showed wooden posts embedded in the brickwork, and big beams, which might have belonged to some superstructure, lay scattered at the foot of the mound. The erosive force of the wind had left nothing in the way of loose earth or débris near the mound, and hence no scope for excavation. The sun-dried bricks measured on the average 19" × 11" × 3–4". There were also some hard bricks, apparently fired, lying at the foot of the mound; they showed the size of 12" × 8" × 2". Pottery débris was very scanty near it, and this suggests its being the ruin of a shrine rather than of some inhabited structure. About 110 yards to the NW. big beams, up to twenty feet in length, lay scattered on the top of a bare clay terrace, marking the position of a completely eroded building.

Timber débris on bare ground.

Wind-erosion had done its work of destruction with equal thoroughness at another small group of ruins, close on two miles to the W.N.W. of the last named. Here we found a small and badly decayed mound of sun-dried brick, about eight feet high and fourteen feet long on its south-west

[7] See below, chap. XIII. sec. i.

side, and near it, on the east, a mass of timber débris which seemed to mark the place once occupied by a structure at least sixty feet long. The heavy but badly-fissured beams lay now on hard clay, swept absolutely clear of any other remains. The little mound rested on a foundation of tamarisk fascines, and its brickwork was reinforced by two layers of reeds embedded at an interval of one foot. About forty-five yards to the NW. there was another plot of ground strewn with the débris of big pieces of timber, which must have once belonged to the framework of a large dwelling built of timber and wattle. Now they lay on the hard bare clay soil which erosion had pared down to a level about ten feet lower than that marked by the foundation of the mound close by.

Ancient river-bed at site.

It was on returning to camp from this last small 'Tati' that I particularly noticed the unmistakable old river-bed we had to cross, marked by the dead Toghraks and tamarisk-cones lining the banks. The winding bed was from fifteen to twenty feet deep, with a width of about 150 to 180 feet. The banks were very steep and remarkably well preserved. The fact that the general direction of the bed lay towards the north-east, as seen in Plate 22, and thus nearly coincided with that of the prevailing wind, may have helped to protect it. It was curious to note, as I repeatedly observed elsewhere, that the fairly level bottom of the bed showed scarcely any signs of wind-erosion, though the ground on either bank was cut up into a perfect maze of Yārdangs and trenches. The bed seemed to connect with the one we had crossed when approaching the ruined area from the south on December 17.

'Tati' débris around L.A.

Between the scanty remains just described and the ruined station south, as well as on the other sides of the latter for a distance of about a mile, the ground showed here and there patches covered with potsherds of the same general type as prevailed within the walled enclosure. Seeing how even substantial structures had fared under the constant scouring by wind-driven sand, it was easy to understand why humbler abodes, probably built with mud walls such as I had last seen at Charkhlik, or perhaps consisting of mere reed-huts like those of Abdal, had completely disappeared without leaving any trace but the pottery débris of these little 'Tatis'. But of the life once led here and of the traffic once passing over this ground the bare eroded surface had retained plentiful relics in the shape of small objects in stone, metal, and other hard materials. It was a happy hunting-ground for honest Jasvant Singh, the Surveyor's cook, and the labourers, when they were not kept busy by digging, and the 'finds' they brought me made up the considerable collection shown in the descriptive list below (L.A. 001–00177). Of some of the more interesting finds brief notice still remains to be taken here.

Potsherds, mat-marked or glazed.

Among the specimens of potsherds the grey, mat-marked pieces, L.A. 002, 00146 (Plate XXXVI), may be mentioned as corresponding exactly to Chinese ware of Han times found along the Tun-huang Limes.[8] The fragments retaining a deep blue-green glaze, L.A. 003, 007, 00100, are more likely to represent local ware, as are certainly the specimens of the predominant poorly levigated pottery, L.A. 001, 009, 0010, including the lamp L.A. 006 (Plate XXXVI). The abundance of small objects in bronze at this site is very striking, and far greater than comparison with the contemporary Niya Site might have led one to expect.[9] I think that we may recognize in it, as well as in the disproportionately greater number of coins found, an indication of the busy traffic which the great Chinese trade-route brought to the ancient station. The bronze arrow-heads, L.A. 0017, 0069, 0082, illustrated in Plate XXIX, are certainly of the same type as the ancient Chinese 'ammunition' found at the watch-stations of the Limes. The numerous finds of pieces from Chinese bronze mirrors, L.A. 0027–29 (Plate XXIX), 0078, 0084, etc., point to easy import from the East. The winged dragon shown in relievo on L.A. 00113 (Plate XXIX) closely resembles the ornamentation of N. 009 (*Ancient Khotan*, ii. Plate LXXIV). Bronze rings, L.A.

Small objects in bronze.

[8] See above, p. 384.

[9] Cf. *Ancient Khotan*, i. pp. 414 sqq.

0094, 00107, 00111, 00118 (all in Plate XXIX), etc., as well as bronze buckles, loops, strap rings, and other fittings for harness (see e.g. L.A. 0013, 0050, 0051, 0053, 0089, in Plate XXXVI), are plentifully represented. Special mention may be made of the fragment of a bronze dagger, L.A. 0014 (Plate XXXVI), the bronze button, L.A. 00106 (*ibid.*), and the large ornamented bronze boss, L.A. 0020 (*ibid.*), which is likely to have been fixed on a shield. The small bronze bells of the 'grelot' type, L.A. 00103–105 (Plate XXIX), 00164, resemble those found at the Niya Site.[10] A specially interesting piece is the large fragment, L.A. 0066 (Plate XXXVI), of bronze open-work, showing a floral scroll ornamentation and thickly covered with small raised dots which may have served to hold enamel *cloisonné*.

Other metal fragments. The frequency of small iron tools, such as L.A. 0042, 0077, 0090–93, etc., is in striking contrast with the rarity of this metal at the Niya Site. The same applies to the very numerous spinning whorls in lead (L.A. 0068, 0097–98, etc., Plate XXIX), a metal of which not a single specimen appears to have been found there. **Abundance of glass.** Glass beads in varied colours and fragments of glass vessels were, however, found in as great plenty here (see L.A. 00132, 00139, 00165, 00173 in Plate XXIX)[11] as at the former site. This fully confirms what we know from Chinese historical sources about glass having been a favourite article of Western import into China down to the second quarter of the fifth century A.D., when traders from 'the country of the Great Yüeh-chih bordering on the north-west of India', i.e. probably the middle Oxus, first introduced glass manufacture into China.[12] In view of this record, special interest would attach to L.A. 00128, a small broken lump of green glass, if it really should prove to be slag, as in this case we should be led to conjecture that the local manufacture of glass had already, before the middle of the fourth century, advanced as far east as the Lop region. Imports from the distant West may at any rate be recognized in the gilded glass beads, L.A. 00171. a–d (Plate XXIX), which, according to the references supplied by Mr. Woolley, closely resemble a type of bead common in classical Egypt.[13] Western origin is very probable also in the case of the paste beads, of which two show decoration with inlaid bands of white; see L.A. 00132, 00135 (Plate XXIX). **Stone age relics.** Finally reference may be made to an antique of far greater age, the fine celt in green jade, L.A. 00145 (Plate XXX), which was found by my Loplik guide Mullah, when reconnoitring to the east of the ruined station. Its neolithic origin seems certain. Earlier still are the small jasper blades, L.A. 00153–159, and the jasper point, L.A. 00160 (Plate XXX), which may belong to the lower palaeolithic period.[14]

Section VI.—REMAINS OF A BUDDHIST TEMPLE

No more structural remains traced. By the evening of December 22 the clearing of all ruins at the ancient Station had been completed. The search made through Mullah and other men whom I sent out with the promise of good rewards for the discovery of more ruins had, just like my own reconnaissance northward, failed to disclose any structural remains still awaiting excavation in the vicinity of L.A. My resumed explorations of 1914 have shown that, as far as the more distant ground to the north-east was concerned, this report was not altogether right. Yet at the time I had reason almost to feel relief at it; for our ice-supply was rapidly diminishing, and the information brought by the Surveyor on his return from the western group of ruins (Plate 22; marked by me L.B.) had shown me that

[10] Cf. N. 0010 in Pl. XIX; *Ancient Khotan*, ii. Pl. LXXIV, N. 004. e, 0012. a.

[11] See for beads also L.A. 00136, 00139–141, 00165–167, 00169–172, in descriptive list; for glass ware fragments, L.A. 0062, 0070–75, 00126–128, 00168, 00172.

[12] Cf. Hirth, *China and the Roman Orient*, pp. 230 sqq.

[13] See below, p. 432; above, p. 247 under N. XII. 0010.

[14] Owing to a label having become partially illegible it is doubtful whether L.A. 00153–160 were picked up near L.A. or on eroded ground S.W. of L.B. The point is of no consequence, as the occupation of the whole of this ancient delta during prehistoric periods is certain.

work for several days was awaiting me there. My anxiety about retaining an adequate margin of time for it was much increased when on the evening of December 22 Tokhta Ākhūn, who had taken the camels to the spring of 'Yangi-bulak' at the foot of the Kuruk-tāgh, arrived with the report that the water there was so salt that practically no ice had as yet formed, and this in spite of the bitter cold, my minimum thermometer registering that morning a temperature of 46 degrees Fahr. below freezing-point. For the same reason the camels, even with the thirst of ten days, had refused to touch water there. So with the hoped-for supply of ice from the spring failing, and with the added care about the camels holding out long enough, I could not feel much regret at Tokhta Ākhūn having, during a two days' reconnaissance around the western site, failed to trace more ruins.

No ice found at salt spring.

Start for L.B. site.

On the same evening the camels I had sent back to our half-way depot for the reserve of ice and supplies opportunely arrived. With their help it became possible on the following day to shift camp to the western group of ruins. As the distance was less than eight miles, I could use the whole forenoon for the careful examination and measurement of the ruined Stūpas already described, and for getting the remains we had cleared buried again by the men for protection.

The tramp to the new camp with the heavily-laden men was made trying by the constant succession of steep ridges and furrows of Yārdangs which had to be crossed almost at right angles. On the way I was able to examine the ruined Stūpa which had been our first guiding mark to the site (Fig. 97). It had suffered much havoc by erosion, but the two upper stories of the square base and the foot of the cylindrical dome could still be made out clearly (see Plate 26). The lowest story could only be traced with difficulty at the south-east foot, as most of the masonry had slipped away owing to the clay beneath having been undercut by wind-erosion. The base at its foot had measured approximately forty feet square, and the total height of the ruin, including the remnant of the cylindrical dome, was about thirty-four feet from the top of the first story of the base. Here, too, as in the Stūpas L.A. x, xi, the several stories of the base had been built as separate concentric blocks of masonry round a circular core. This, corresponding to the cylindrical superstructure and seventeen feet in diameter, was here clearly distinguishable at the exposed north corner. Embedded in the masonry of the core was a reinforcing frame of timber. The sun-dried bricks showed the average size of those found at L.A.

Ruined Stūpa *en route*.

Group of ruins L.B. i–iii.

Early on December 24 work was started at the small group of ruins, L.B. i–iii (Plate 27), including the little Buddhist shrine which one of Dr. Hedin's men had accidentally discovered in March, 1900, and from which he himself had brought away, in the following year, a number of fine wood-carvings.[1] His visit had then been paid from the camp established at L.A., and had hence been confined to the few hours available between the tramps to and fro. This left hope for more finds here, and I was not disappointed. Besides the badly eroded remains of the shrine L.B. ii the ruins comprised those of two larger structures, L.B. i, iii, which flanked it to the north-east and south-west, and had manifestly served as dwellings (Fig. 103). The whole, as shown by Plate 27, occupied the top of an island-like plateau, about 250 feet long and rising fully twenty-eight feet above the wind-eroded depression immediately at its foot.

Timber and wattle walls of L.B. i.

The dwelling to the north-east, L. B. i, proved mainly of interest owing to the clearness with which the constructive details of the walls, of timber and wattle, could be studied. In the largest room, measuring 36 by 20 feet, the walls to the north-west and south-west had survived only to about a foot or so above the floor. But those to the north-east and south-east had at some early period fallen bodily outwards and, lying flat on the ground, had escaped erosion. The walls showed a framework of posts inserted into the foundation beams at intervals of 15 to 21 inches.

[1] See Hedin, *Central Asia and Tibet*, i. pp. 383 sqq.; *Central Asia*, ii. pp. 641 sqq., Pl. 76.

To them was fastened a well-made wattle which consisted of horizontal reed bundles and was covered on either side with a plaster facing to a total thickness of eight inches. The posts and a massive wooden pillar, found within the same room and 1 foot 5 inches in diameter, showed that the height of the room had been about ten feet. This building must have been thoroughly cleared out after its desertion; for in spite of the excellent cover afforded by the fallen walls nothing was found here.

Finds in ruined dwelling L.B. III.

We fared somewhat better on clearing the ruin L.B. III (Fig. 103), which lay about ninety feet to the south-west. Only three rooms, built of timber and wattle, could still be traced under the slight covering of sand. But pieces of heavy foundation beams, which covered the eroded slopes eastward, showed that the building must have been originally larger. The wattle here consisted of horizontal reed bundles below and diagonally woven tamarisk matting higher up. In the large room a massive octagonal pillar of wood once supported the roof. Besides some small miscellaneous objects of bronze and paste, a quantity of rags of fabrics in silk, wool, and felt (L.B. III. 004, 007), and three Chinese copper coins of Han types, there were found here a number of pieces belonging to a large wooden chest or cupboard raised on four high legs and decorated by relievo carving, L.B. III. i (Plate XLVII). A detailed description of the pieces and the manner in which they fitted together will be found in the list below. In general constructive type and dimensions the cupboard closely agreed with the well-preserved but plain cupboards unearthed at the Niya Site,[2] and there can be no doubt about its having served, just as they had, for the safe storage of victuals. The four-petalled rosettes which form the decorative diaper carved in low relievo were also familiar to me as a motive from ornamental wood-carvings of the Niya Site.[3]

Decorated woodwork at shrine L.B. II.

My hope of other finds of artistic interest was fulfilled as soon as I had clearing begun at the heap of timber débris which covered the small eroded terrace in the centre and marked the position of the shrine, L.B. II, already referred to (Fig. 103). Even among the woodwork which lay on the top, practically without any sand to protect it, just as Dr. Hedin's people had left it, there were carved panels and posts still retaining at least portions of their well-designed floral decoration in relievo. In other pieces, which had lain fully exposed to the force of wind and sun, the surface of the wood had become badly bleached and splintered. But even among such withered carvings my eye was caught by outlines recalling floral ornaments familiar from the Niya Site or Gandhāra sculptures.

It was even more gratifying when, from the sand which had accumulated over the eroded slope on the south-east side of the terrace (Fig. 104) to a height of three or four feet, there emerged numbers of fine pieces of ornamental wood-carving which had found a place of refuge there. Among them some of the beams or posts could at once, by their very size, be recognized as having belonged to the wall decoration of the shrine. That this must have been mainly built of timber could be inferred also from the numerous fragments of open-work wooden panels, many of them showing bold and graceful designs, which had evidently filled the spaces in the wall left free for lighting.

Structural remains of L.B. II.

That the shrine was of small size and approximately square was proved by the foundation beams on the south-east and north-east sides (see Plate 27; Fig. 103), which had remained *in situ* on the top of the terrace and measured 19½ and 18½ feet respectively. The two beams overlapped at

[2] Cf. above, p. 224 with Pl. 11; Fig. 57; also *Ancient Khotan*, i. pp. 377, 379.

[3] See the ancient chair, N. vii. 4, in *Ancient Khotan*, ii. Pl. LXVIII; also *ibid.* Pl. LXIX. For other carvings excavated in 1906, see below, Pl. XVIII, XIX. The same decorative motif is of frequent occurrence in 'Coptic' carvings of the Early Christian period; see Strzygowski, *Kopt. Kunst.*, Pl. XI–XIII, p. 172 sqq., for incised bone panels of the 3rd–4th century.

the corner, being dovetailed. In front of the south-east beam there lay, stretched out on the eroded slope, a portion of the timber frame of the wall which it had once borne, just as it probably may have been thrown down by the wind after centuries of exposure. The photograph, Fig. 104, shows it in the foreground. The beam which had carried the roofing, 17½ feet long, was still intact, with the dowels into which posts had fitted. The two posts at the eastern end of the beam were still fitted into their dowels and held together in their original position by horizontal joining pieces (see Fig. 104 and elevation of frame drawn to scale in Plate 27). Two dowels, on either side of the centre of the roof beam and 5′ 8″ apart, indicated the position of two jambs once flanking an entrance, and as the fine and well-preserved beam, L.B. II. 0037 (Plate XXXI), with mitred ends and floral scroll carving on its face, has a length exactly fitting this width of entrance, it is highly probable that it once served as the lintel over this very doorway.

Relics of sculptures.

I was unable to trace any indication of the architectural features of the interior of the shrine, a circumstance which the disturbed condition of the remains suffices to explain.[4] It may, however, be surmised that the elaborate lathe-turned balusters, L.B. II. 0010, 0038–45 (Plate XXXIII), and the rails which they formerly supported, L.B. II. 0046–51 (Plate XXXIII), had once served to enclose some portion of the space within the shrine, and probably that containing objects of worship. That there must have been images in the shrine may be considered as certain, however scanty the relics which prove it. They consist of the arm of a wooden figure, carved in the round or high relievo, L.B. II. 0052 (Plate XXXIV), and two small pieces of stucco relievo, of which one, L.B. II. 6, probably formed part of the head-dress of a large stucco image, while the other, L.B. II. 7, is likely to have belonged to the flame border of a large halo or vesica in relievo as found so often behind Buddhist images of T'ang times, from Khotan to Tun-huang. The surface of the wooden arm has suffered so much from exposure that it cannot be determined whether it was originally painted or coated with stucco. But if a conjecture may be hazarded, the clenched hand seems curiously suggestive of a pose common in those figures of Lokapālas, or 'Guardian Kings of the regions', which in the stucco image groups of the 'Thousand Buddhas' of Tun-huang are so frequently associated with a Buddha or Bodhisattva.[5]

If there were any need of demonstrating the fact that the ruin L.B. II is that of a Buddhist shrine, it would suffice to refer in proof of it to the two finials in wood, L.B. II. 0033–34 (Plate XXXII), representing Stūpas. About twenty and thirty inches in height respectively, they accurately reproduce the characteristic structural features of Stūpas, and may appositely be compared with the small Stūpa model, N. v. xvi. 001 (see above, pp. 246 sq.), found at the Niya Site. They show a square base at the bottom and above it a circular drum, surmounted by a dome which carries a square member spreading out at the top, such as is regularly seen in well-preserved Gandhāra Stūpas and also in the small stone-carved model, Yo. 00121 (Plate VI). The whole is crowned by a series of 'umbrellas' like those which Indian Stūpas invariably once carried, whether in wood or stone. The mortice found in the base for attachment suggests that these little Stūpa representations served an architectural purpose as finials. But their exact position cannot be proved, and there is the neatly-carved little finial, L.B. II. 009 (Plate XXXV), still retaining traces of

[4] It is probable that if a careful examination of all the remains could have been made, and their positions marked and measurements taken by some one with archaeological knowledge before they were disturbed by the operations of Dr. Hedin's men, other architectural details could have been determined. His account of the ruin, *Central Asia*, ii. pp. 624 sqq., as regards the ground-plan mentions only the presence of four massive foundation beams (*ibid.* p. 645). Pl. 76 illustrates the men's *modus operandi* in searching the remains. [For the use of Dr. Hedin's sketch-plan of 'The north-westernmost village of Loû-lan', *ibid.* Pl. 75, it should be noted that by some inadvertence the north-south bearings in it have been reversed.]

[5] See below, Figs. 207, 227, 228.

gilding, to indicate the possibility of their having been intended as votive Stūpa models like those still smaller ones so frequently found in clay.[6]

Among the individual pieces of decorative wood-carving to which we may now turn two main groups can conveniently be distinguished. The first comprises pieces of varying sizes which, from the character of their relievo carving or from other indications, may be assumed to have been used as beams or otherwise in a horizontal position along the inside or outside of the walls. I have already referred above to the fine beam with mitred ends, L.B. II. 0037 (Plate XXXI), which appears to have formed a lintel over one of the doorways. It is decorated with a floral scroll of real beauty, which shows motives of unmistakably classical origin. This accounts for the striking similarity of this scroll to 'Coptic' decorative carvings of the Early Christian period, as referred to in the descriptive list below. The Hellenistic type of the motif is particularly striking in the graceful triple leaves filling the hollows of the winding stems and the six-petalled rosettes. These triple leaves appear in practically identical form and arrangement also in the decoration of Gandhāra relievos.[6a] The piece L.B. II. 0036 (Plate XXXI), which shows the same pattern but without central interlacing or mitred ends, may have occupied a position of corresponding height on the wall as a decorative frieze continuing the lintel. The dimensions of the two pieces, L.B. II. 0036–37, in relation to the total available length of wall, would permit of this assumption. **Beams with decorative carving.**

The four wooden beams of large size, L.B. II. 0015. a–d (Plate XXXI), undoubtedly formed part of a horizontal wall decoration, probably placed lower down than the frieze just conjectured. The chief feature of their ornamentation is a series of hanging circles linked by straight cinctures and each containing an eight-petalled flower (lotus or rosette). The scroll ornament thus formed corresponds very closely to the one which I found painted all round the walls of the main hall in the ruin N. III of the Niya Site excavated in 1901, and which there occupied a position about 3 feet 8 inches below the top of the walls.[7] Both the scroll and the flowers are undoubtedly derived from motives of floral decoration common in Gandhāra relievos.[8] Half-rosettes of the same type fill the spandrels above and below, as well as the triangles left between diagonally crossing bands at one end of each beam. The same rosettes are seen in L.B. II. 0013 (Plate XXXI) within the oval spaces formed by interlacing branches, a decorative design found equally in 'Coptic' carved friezes (see list below). On narrower beams, L.B. II. 0035. a, b (Plates XXXI, XXXIII), we observe a relievo band of a plain but effective lozenge pattern edged by billeted mouldings of a classical type. **Ornamental motives.**

Of distinct interest, but unfortunately very poorly preserved, is the wooden beam L.B. II. 0027 (Plate XXXII). Its relievo carving shows the upper parts of eight human figures, likely to be intended for Buddhas or Bodhisattvas, arranged in a row apparently under arcades. This decorative scheme, too, has its exact counterpart in Gandhāra relievo sculpture.[9] On another badly-decayed beam or panel, L.B. II. 0032, we have the relievo design of two running animals facing a central figure, unfortunately too indistinct for reproduction. The fragment of a beam or panel, L.B. II. 007 (Plate XXXII), deserves notice for the good free carving in its relievo decoration of leaves and tendrils. Simpler in design are the two long carved pieces, L.B. II. 0025–26 (Plate XXXI), which by the slanting cast of their ends are also marked as beams. Their decoration consists of plain interlacing ribbons which form lozenges filled by four-petalled rosettes. **Human and animal figures.**

[6] Cf. above, p. 161, and below, chap. XXVI. sec. iii.

[6a] See e.g. Foucher, *L'art du Gandhâra*, i. p. 337, Fig. 174.

[7] Cf. *Ancient Khotan*, i. p. 333; ii. Pl. VII.

[8] Cf. Foucher, *L'art du Gandhâra*, i. p. 218, Figs. 96, 213; Grünwedel-Burgess, *Buddhist Art*, Fig. 48.

[9] Cf. e.g. Foucher, *L'art du Gandhâra*, i. Figs. 77, 134–136; also now ii. pp. 329 sqq., Fig. 457; also the stucco friezes in my article, *Excavations at Sahri-bahlōl*, Archaeological Survey Report, 1911–12, Pl. XLIV, L.

Open-work panels.

In the second main group of wood-carvings may be placed the numerous fragments of open-work panels which, as already explained, must have occupied a considerable portion of the spaces in the wall and served for the admittance of light and air.[9a] Simplest in design are L.B. II. 0028 (Plate XXXIII), showing heavy trellis-work with diamond openings, and the pieces, L.B. II. 0023–24, in which an open trellis-work of diagonal bars is combined with wheels about each point of junction. More characteristic in style of design is the large open-work panel, L.B. II. 0016–17 (Plate XXXI), in which a four-petalled lotus with sepals between fills a rectangular plain-bordered frame. Fragments of similar panels are L.B. II. 005, 0030 (Plate XXXII). Other panels of this class must have contained representations of grotesque beasts carved in relief as shown by the interesting fragments L.B. II. 0011–13, 0053 (Plate XXXIII) and II. 0021 (Plate XXXIV).

Indo-Corinthian capital.

Among wood-carvings distinct from the above groups the most interesting piece is L.B. II. 0014 (Plate XXXII), the fragment of a richly-carved capital of Indo-Corinthian type with acanthus leaves and volutes. Both the way in which the octofoil plan of the top is combined with a circular lower plan and the method of carving are characteristics which, as pointed out by Mr. Andrews in his description in the list below, are found again in Byzantine capitals. In view of what recent research has proved as to the dependence of Byzantine art on the Eastern development of Hellenistic art, the early date of this Lou-lan capital, which can scarcely be later than the third century A.D., and its discovery on the very high road to the Far East, may claim special interest. Among other wood-carvings may be mentioned the large block, L.B. II. 0014 (Plate XXXII), showing a circular eight-petalled lotus or rosette which, as comparison with the panel M. v. 0012 from a Mīrān temple shows,[9b] may have formed part of a lintel; the triple wooden bud, L.B. II. 004 (Plate XXXIV), and the fragment, L.B. II. 006, of a lotus-wreath carved in the round.

Wooden pins for architectural decoration.

The curious wooden stave, L.B. II. 002 (Plate XXXV), slightly tapering at one end and with a large ball at the other, like similar wooden staves subsequently found at a neighbouring ruin, L.B. IV. i. 2; iv. 001–002 (Plate XXXV); v. 0010, was for a long time rather puzzling. That they had all served as pins for fastening beams or panels to the timber framework, and that their knob-like ends, whether shaped as balls or cones, or to resemble inverted thistle-heads, were added for the sake of architectural decoration, was first made clear to me by my architect friend Mr. J. H. Lyon. The use still made in timber construction of similar large-headed metal pins for ornamental purposes supplies an exact parallel. This explanation is fully confirmed by the measurements of the pin portions proper in all these pieces. Their length varies from nine to ten inches, and thus corresponds exactly to the usual thickness of ten inches which I measured in the foundation beams of L.B. I–III and neighbouring ruins, and which is likely to have been that of the walls also. They all show a section of seven-eighths to one inch square, and with this they fitted exactly into the holes which I actually found at the ends of two beams excavated in the hall L.B. IV. iv.[10]

Ancient whisk-broom.

The whisk-broom of grass, L.B. II. 0054 (Plate LII), which came to light from the sand protecting these scanty architectural remains of the little temple, presents a quasi-pathetic interest; for, just like the brooms found in 1900 in one of the temple cellas of Dandān-oilik,[11] it must have been in the hands of the very last attendants who endeavoured here to keep the objects of worship clear of dust and sand. It is, perhaps, significant of the prevalent Chinese influence on the ancient route through Lou-lan that the make of this humble household implement agrees in its constructive principle with that of the broom T. XIII. iii. 001, subsequently discovered at one of the watch-

[9a] Fig. 294 in Hedin, *Central Asia*, ii, illustrates how these panels from L.B. II were originally framed.

[9b] Cf. below, chap. XIII. sec. v, and Pl. XLVII.

[10] See below, p. 402.

[11] Cf. *Ancient Khotan*, i. p. 251.

stations of the ancient Tun-huang Limes, while entirely differing from that of the brooms found at Dandān-oilik and the Niya Sites.

Relics from refuse-heap.

As an appropriate pendant a small refuse-heap, too, had survived near the south-west side of the shrine and about two or three feet below the level of the foundation beam. Besides a fragmentary Chinese slip and a small torn Chinese record on paper, L.B. II. 2, 3 (*Doc.* Nos. 893, 939), there were found here numerous rags of fabrics in silk, wool, and cotton, L.B. II. 0018–19, and a piece of stout cotton canvas which had served as a backing for some stucco relievo, L.B. II. 0020.

Traces of enclosed court.

To the south-east of the shrine the ground was quite clear of débris and eroded down to about nine feet below the original surface level. That this area had been once an open court is made probable by the foundation beam, fully sixty feet long and made up of two jointed pieces of about equal length, which was found extending over eroded soil just outside the line in continuation of the south-east wall of L.B. I and at about fifty feet distance from L.B. II (see Plate 27). This beam showed numerous holes for small posts, but as there was no other débris near, it seems probable that it had only carried the paling of a court. The other remains traceable in the immediate vicinity of L.B. I–III were short stretches of rush fences found about a hundred yards to the south-west and probably once belonging to some enclosure. They obviously owed their survival to the fact that they lay in the direction of the prevailing wind.

Eroded Stūpa mound.

The destructive effect of wind-erosion in this particular area of the site was strikingly demonstrated by a small tower-like mound of sun-dried bricks rising over deeply scoured ground, about one-third of a mile to the east-south-east of L.B. I–III. This ruin, seen in Fig. 105, was all that erosion had left of what certainly was once a Stūpa. It measured about twenty-six feet from east to west and about eighteen feet across at its broadest. The extant height of the masonry above the original ground level, as shown by the tamarisk fascines of the foundation, was only ten feet. The level of this foundation is marked in the photograph approximately by the head of the man, Mullah, standing in front. The sun-dried bricks measured twenty by ten inches, with an average thickness of about three and a half inches. On all faces the masonry was broken, and no structural outlines could anywhere be made out. The bottom of the depression scooped out immediately to the south of the ruin, as seen in the photograph, lay fully twenty-four feet below the original ground level indicated by the foundation fascines.

Section VII.—FINDS IN RUINS L.B. IV–VI

Situation of ruined dwellings.

On the afternoon of December 25 I began the clearing of two buildings which stood close together among the western group of ruins, and which soon proved a specially rich mine of 'finds'. They were situated about a mile to the east-south-east of the Buddhist shrine previously described, and had been discovered by Dr. Hedin on his first visit to the site.[1] He had spent a day there, March 29, 1900, but had been prevented by want of time and labour from undertaking any close exploration of the larger and more important of the two buildings. This ruin, L.B. IV, occupies the top of an isolated terrace, extending for about 170 feet from north-east to south-west and rising well from eight to fifteen feet above the surrounding ground, which, in consequence of wind-erosion, is below the original level. The panoramic photograph reproduced in Fig. 74 shows it as seen from the east after excavation. The ground in the vicinity looked curiously open, as if the

[1] See Hedin, *Central Asia*, ii. pp. 620 sqq., with Pl. 67 showing a rough sketch-plan of L.B. IV, in which the north-south bearing has been reversed by some oversight. Comparison with it of the ground-plan drawn after excavation (Pl. 28) is instructive.

scouring by wind-driven sand had here done its work with greater uniformity. There were not the same close *hachures* of Yārdangs as at L.A., and in places the hollows showed accumulations of drift-sand. A quarter of a mile to the east an old river-bed, winding between lines of dead Toghraks and tamarisk-cones, could clearly be traced, and about half a mile to the south I came upon it again. There it measured over 170 yards across, and, with its bottom only about six feet below the foot of the dead tamarisk-cones, seemed distinctly shallow.

The other ruined building, L.B. v, about thirty yards to the east, had, by the almost complete erosion of the ground it once occupied, been reduced to a heap of much-splintered timber, as seen in Fig. 112, with only one of the massive foundation beams still *in situ*. Some portion of the larger building, L.B. iv, had also suffered badly through the same cause, especially on the north-east side, as shown by the heavy foundation beams and other timber débris which are seen strewing the eroded slopes on the right and in the centre of the panoramic view reproduced in Fig. 74. Fortunately other parts of the terrace occupied by the large dwelling-house—for as such I easily recognized it at my first inspection—had not been much affected by erosion, even though the covering layer of sand was nowhere more than three feet high. As excavation proceeded, I soon realized that the protection enjoyed by this piece of ground was due mainly to the thick and well-consolidated layer of sheep-dung which had accumulated within and around the rooms of the ancient residence. Evidently, for a considerable number of years after its abandonment by the last proper occupants, the building had served as a place of shelter for the flocks of shepherds. I observed this also at certain of the southernmost ruins of the Niya Site,[2] and later shall have to mention the same thing as seen at Mīrān.[3]

Wood-carvings from L.B. iv.

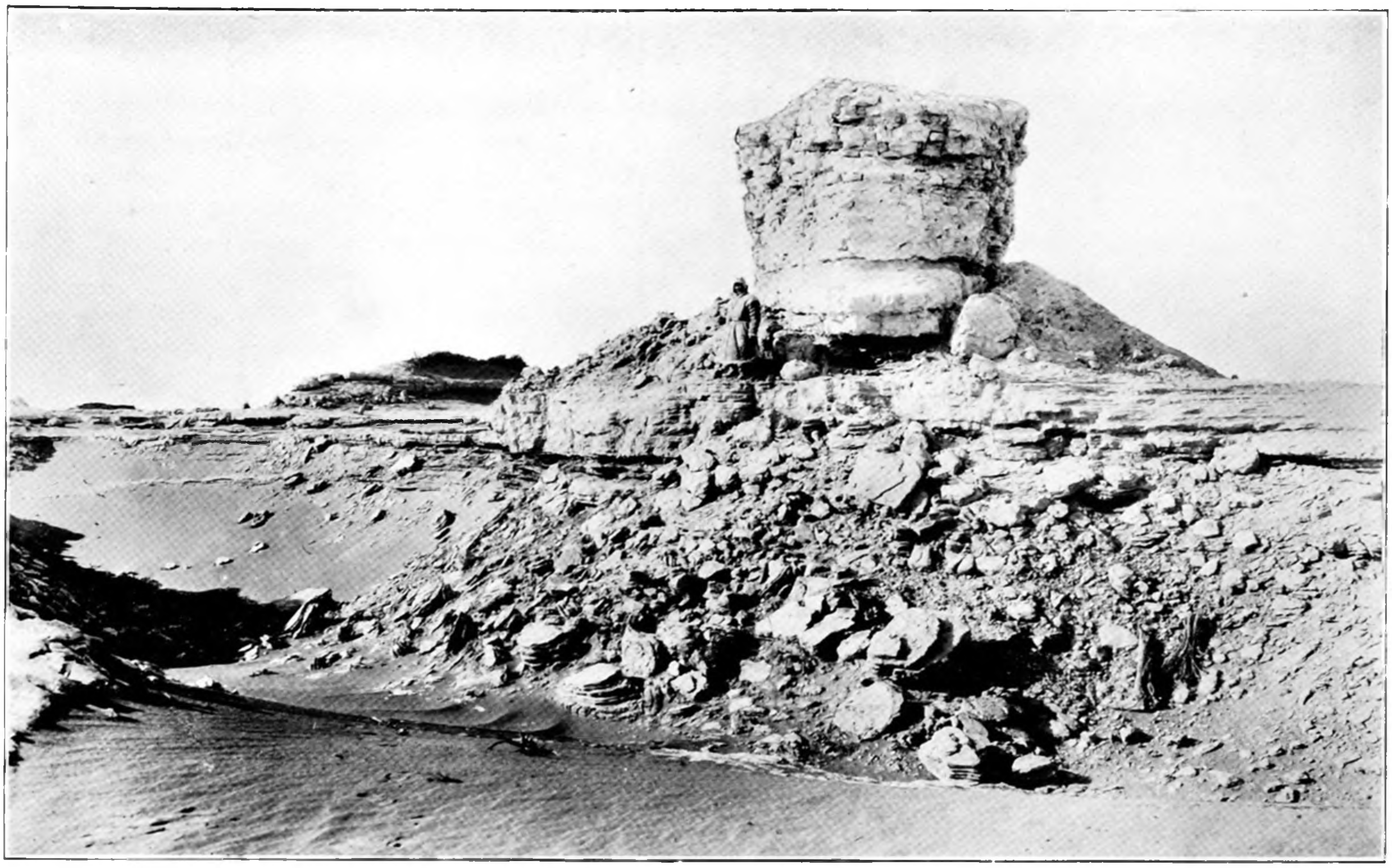
Excavation was begun with the small room L.B. iv. i at the south-west corner of the building. Its walls, like those of the rest of the building, were constructed of horizontal reed wattle, fixed to a framework of posts of the usual type. A wooden partition, adjoining a boarded sitting platform, projected from the south-west wall across the greater part of the width of the room and left only a narrow passage, about 3′ 6″ across, giving access on the south-east to the adjoining hall iv. The small apartment may well have served as an anteroom for attendants. Sheep-dung had accumulated in it above the height of the sitting platform, about one and a half feet from the floor level. Here, close to the surface, several well-carved fragments of open-work wooden panels, L.B. iv. i. 001, 002 (Plate XXXIV), were found showing a pattern of wheels strung on interlacing bands. Another fragment, L.B. iv. i. 005 (Plate XXXIV), exhibits a gracefully designed branch with leaves and berries. As pieces from the same open-work panels were afterwards found in rooms vii and viii at the opposite end of the ruin (L.B. iv. vii. 001, 003, 004; viii. 001; see Plate XXXIV), we must assume that the position of some of these fine wood-carvings was changed after the panels had been broken. Whether this dispersal was caused in ancient times, or possibly by the burrowing of Dr. Hedin's men, I have no means to decide. But what is certain is that the floral ornament shows in all of them, as in other fine wood-carvings found in this ruin, a very strong classical influence.

Kharoṣṭhī tablets found in L.B. iv. i.

Among the other finds made in this small room were a rectangular under-tablet and a covering-tablet, L.B. iv. i. 6, 7 (Plate XXXVIII), both excellently preserved and showing their neat Kharoṣṭhī script in perfect clearness. It is worth noticing that these two tablets seem to be made of the wood of the cultivated poplar, whereas all the Kharoṣṭhī documents found at L.A. are of Toghrak wood, from which we may infer that the latter material was used locally for stationery. Both tablets were discovered at the foot of the platform, and had been protected there by the thick layer of dung. The architectural use of the long wooden pin found here, L.B. iv. i. 2, has already

[2] Cf. above, p. 240.

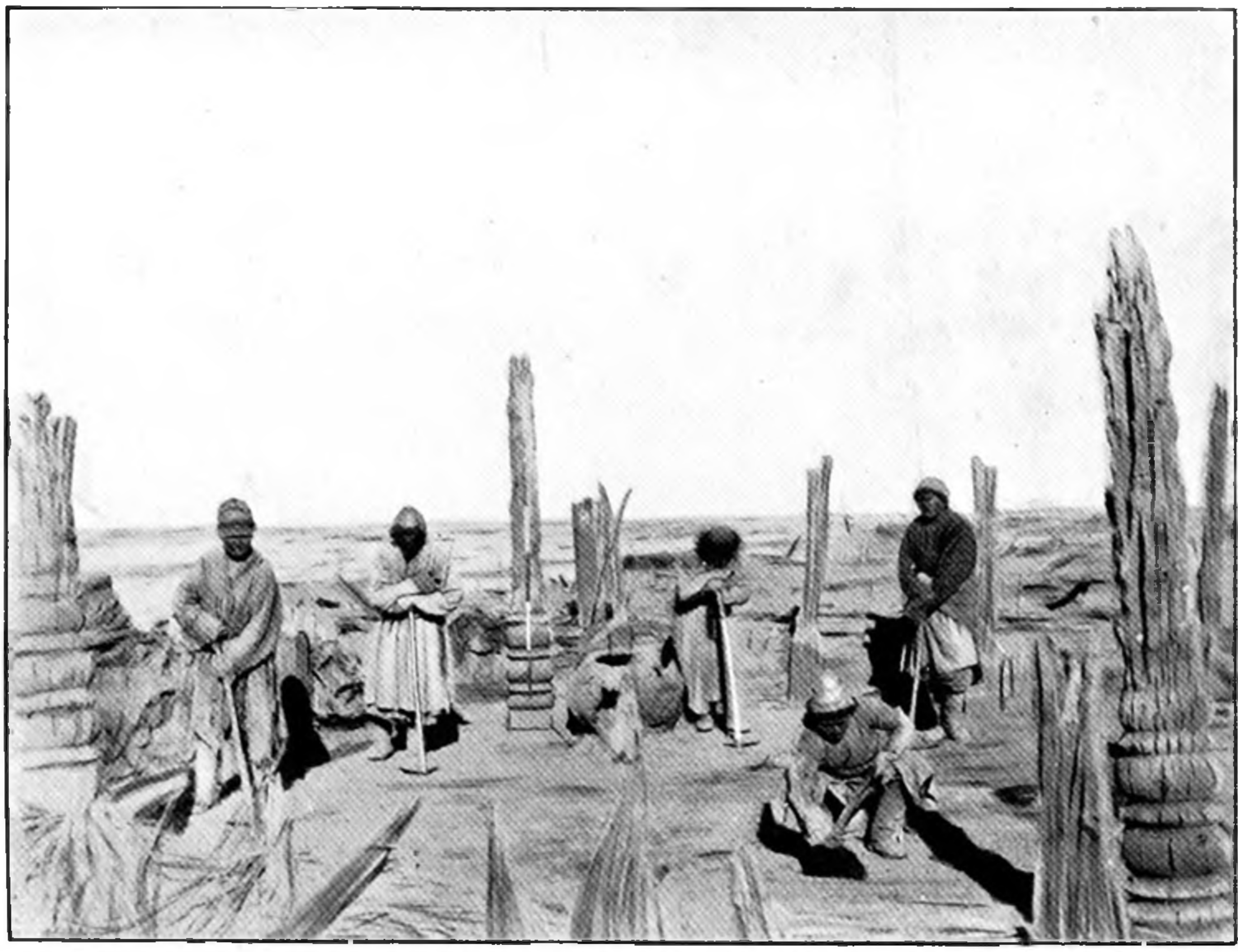
[3] See below, chap. XIII. sec. i.



105. RUIN OF SMALL STŪPA BETWEEN SHRINE L. B. II AND CAMP 125, LOU-LAN SITE.
Mullah, standing at foot of Stūpa, marks original ground level. Foreground shows undercutting of Yārdang ridge by wind-erosion.

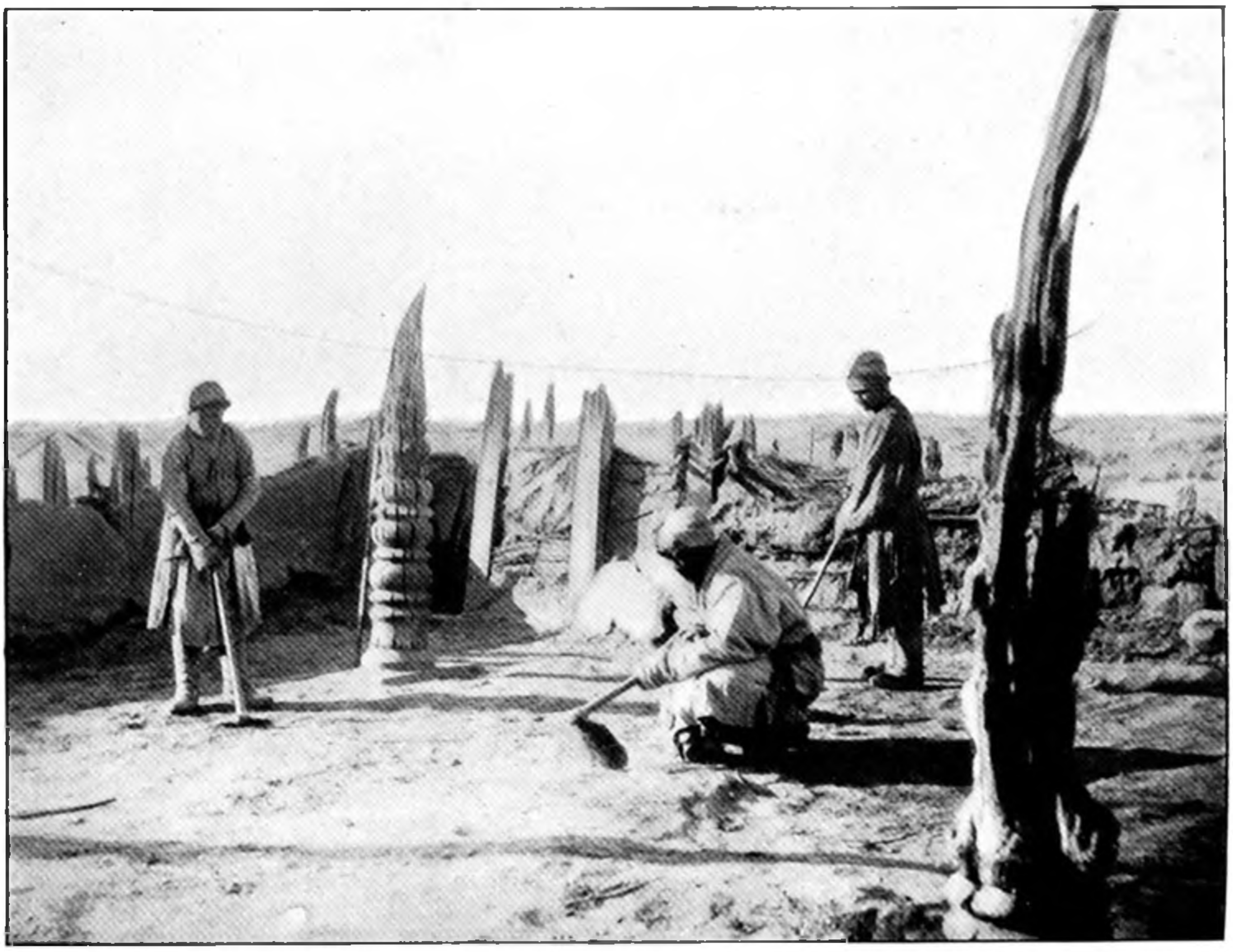
106. VIEW ACROSS HALL iv OF RUINED DWELLING L. B. IV, LOU-LAN SITE, TOWARDS REMAINS OF RUIN L. B. V, BEFORE EXCAVATION.

107. NORTHERN PORTION OF RUINED DWELLING L.B. IV, SEEN FROM S.E., AFTER EXCAVATION.
Room v with pillar in foreground.



109. VIEW ACROSS ROOM iv OF RUIN L.B. IV, LOU-LAN SITE, TOWARDS N.W., AFTER EXCAVATION.

108. ROOMS vii, viii OF RUIN L.B. IV, SEEN FROM SOUTH IN COURSE OF CLEARING.



110. ROOM iv OF RUIN L.B. IV, LOU-LAN SITE, LOOKING TOWARDS WEST, AFTER EXCAVATION.

been explained above.[4] A wooden weaving needle, L.B. IV. i. 006, and a flat horn spoon, L.B. IV. i. 003 (both in Plate XXXV), may also receive passing mention.

The room ii immediately adjoining on the north-east was larger, measuring 17 by 20 feet. The sitting platform found along three of its walls was about one foot high and secured by a revetment which was formed of massive beams carefully joined. Here, too, a considerable number of interesting objects was unearthed. Besides a well-preserved wedge covering-tablet with Kharoṣṭhī address, L.B. IV. ii. 1, a wooden tablet of unusual type, L.B. IV. ii. 002, was found here, measuring about three and a half by three inches. It shows a narrow raised border enclosing a central space sunk into the wood, as if for the reception of wax or some similar coating, and it thus distinctly recalls a Roman waxed tablet. Bevelled cuts on the four sides of the back seem intended for fastening the tablet face to face with another of the same make. The clerical use to which the room was put is further proved by the find of three seal-cases, L.B. IV. ii. 0010–12, of the type familiar from the Niya Site. The piece of white quartz ground in rhomboid form, L.B. IV. ii. 003, may have been used, after the fashion still prevailing among Chinese, for preparing Indian ink on. **Clerical remains from L. B. IV. ii.**

The fragment of a well-woven woollen carpet in red and blue, L.B. IV. ii. 0013 (Plate XXXVII), shows some novel features in its technique. But far more interesting is the well-preserved woven slipper, L.B. IV. ii. 0016 (Plate XXXVII), on account of the elaborate decoration of its 'uppers'. They are covered with a figured polychrome woollen fabric woven to shape in one piece. Above the brocade-like pattern running round the sides and lower part of the toe there is inserted in front a crescent-shaped piece with a succession of bands which show tasteful geometrical designs in a variety of exquisitely matched colours. Their general style curiously recalls Coptic work as illustrated by fabrics from Egyptian graves.[5] **Decorated textile remains.**

Among implements may be mentioned the fragment of an iron knife, L.B. IV. ii. 001 (Plate XXXVI); a horn knife-handle, L.B. IV. ii. 006 (Plate XXXV); a wooden bar, L.B. IV. ii. 0015 (Plate XXXV), probably meant as a bow-grip. The curious distaff-like object, L.B. IV. ii. 005, close on eleven inches long, consisting of a plain shaft swelling into a rounded knob near one end, has, like two other specimens from this ruin, L.B. IV. 005 (Plate XXXV) and L.B. IV. v. 006, been recognized by Mr. T. A. Joyce as a wooden bird-arrow. It was used for killing birds without spoiling the feathers by blood. The little wooden cross, L.B. IV. ii. 009 (Plate XXXV), which, just like the modern *chūluk* of Turkestān, was used for tying up lambs, may well be a relic of the time when the building had become a sheep-pen. For a variety of other small objects, including plentiful fragments of fabrics in wool, silk, and felt, found in this part of the building and in the fenced courtyard iii close by, a reference to the entries under L.B. IV. ii–v and IV. iii in the list below must suffice.[6] Here I may also conveniently mention the pottery specimens L.B. IV. 001 and IV. ii–v. 006 (both in Plate XXXVI). They represent two well-defined ceramic types common at the site and characteristic of the period when the ancient Chinese route led past here. The first is typical of the better-class local ware in red clay, and the other of the dark grey mat-marked ware which my explorations along the Tun-huang Limes have proved to be associated throughout with Chinese occupation during Han times.[7] **Miscellaneous implements.** **Pottery specimens.**

The large room, iv, at the southern corner of the building measured 28 by 26 feet inside, and had preserved its timber and wattle walls to a height of about three feet almost everywhere. Fig. 106 shows its area before excavation, and Figs. 109 and 110 after. What at first had seemed the floor **Refuse-filled large room L.B. IV. iv.**

[4] See above, p. 398.

[5] For examples see for instance the plates in Forrer, *Seidentextilien von Achmim und Panopolis.*

[6] See below, p. 446.

[7] See above, p. 384; below, chap. XV. sec. iv, v.

turned out to be a consolidated mass of refuse from the sheep-pen and cow-shed overlying the original soil to a height of over a foot and a half. The effect of the protection thus afforded was best illustrated by the condition of the four massive round pillars which had once carried the ceiling and still remained upright. Relatively well preserved up to a height of about three feet from the ground, the bold lathe-turned mouldings gradually grew less and less recognizable higher up owing to the sand-abraded and splintered condition of the wood, as seen in Fig. 110. The rectangular plinths of the pillars were all in perfect state. The jambs of the doors leading into rooms i and vi can also be seen in the photographs.

Finds in room L.B. IV. iv.

The finds made in this hall were confined to a small fragment of a paper document in Kharoṣṭhī, L.B. IV. iv. 004, the lathe-turned wooden leg of a cupboard, L.B. IV. iv. 003 (Plate XXXIII), and fourteen of those large wooden pins serving to secure timber pieces the decorative use of which has already been discussed above.[8] As the two specimens brought away, L.B. IV. iv. 001–002 (Plate XXXV), show, the knobs of the pins were here of conical shape and lathe-turned. As I found that these pins fitted holes at one end of two narrow beams which turned up in this room, it occurred to me on the spot that they might have been used to secure and, at the same time, to decorate the ends of smaller beams supporting the roof where they joined on to the main cross-beams or else bore the frame of a sub-aethrial opening. Near the northern pillar there was found, embedded in the dung, a large trough, such as used for the feeding of cattle, dug out roughly from a tree trunk. This and an eating tray of equally rough make, 18 by 11 inches, strikingly illustrated the contrast between the original character of the building and the base use made of it when the ancient settlement had fallen to the status of a primitive pastoral station.

Architectural remains in L.B. IV. v.

In the poorly-preserved room vi, immediately adjoining on the north-east, the only find was a wedge under-tablet, L.B. IV. vi. 1, subsequently fitted with its covering-tablet, which was discovered in room v. All the richer, in contrast, was the yield of this latter room. As the plan in Plate 28 shows, it measured approximately 25 by 28 feet, and a sitting platform between three and four feet wide ran round three of its sides. Heavy beams, fully a foot thick, served as a revetment, as seen in Fig. 107. The floor of the central area was covered with a solid crust of dung, fully two feet in thickness. It must have accumulated while the building was still more or less intact but used as a sheep-pen and cattle-shed. The fine round pillar, 11½ feet high and 4 feet 7 inches in circumference, which bore the roof, and which in Fig. 107 is seen set up again on its circular base carved of one piece of wood with the oblong plinth, lay on this deposit of refuse. The big double bracket resting on a plain square capital which this pillar had carried (both seen on the right in Fig. 107) was found lying close by to the north-east, just as it had fallen on the dung layer. The inset in Plate 28 shows pillar, double bracket, etc., drawn to scale. On the top of the refuse and just south of the central pillar there lay a piece of diagonal tamarisk matting and a solid wooden frame, 3 feet 2 inches square, made of boards seven inches square in section. Both are likely to have belonged to the roof as it existed while the building was still used by herdsmen.

Lacquered wood-carvings.

The clearing of the consolidated crusts of refuse took far more time and care than mere digging in sand would have done. But it was rewarded by 'finds' as varied as they were plentiful. If records were restricted to two Kharoṣṭhī tablets and a Chinese slip, apparently undecipherable, there was all the more interest in the fine wood-carvings here recovered. The best-preserved and also artistically most valuable pieces among them are two excellently carved and lacquered wooden uprights from chairs, probably legs or arm-rests, which bring vividly home to us the close and varied relations of the ancient local art of this region with the Far West. One, L.B. IV. v. 0013

[8] See above, p. 398.

(Plate XXXIV), carved in a kind of half-round, represents a grotesque beast of a composite type closely resembling in character and design that seen in the chair-legs, N. xii. 3, which I excavated in 1901 at the Niya Site.[9] The pose and treatment distinctly recall the style of Persepolitan sculpture, with the suggestion of distant Assyrian ancestry, down to the many-coloured spirals which indicate the hair on the head and round the claws. The work is decidedly finer than in the corresponding pieces of the Niya Site, and the lacquered colours are better preserved.

Carving of composite monster.

The other, L.B. IV. v. 0023 (Plate XXXIV), larger and carved almost in the round, represents also a composite figure, but in this case partly human, just like the other pair of monsters, male and female, N. xii. 3, found at the Niya Site with the chair-legs above mentioned. In almost all details of design the correspondence is most striking, as a comparison of Plate XXXIV with Plate LXX of *Ancient Khotan* will show, and to this is added the identity of dimensions, the length and width being in each case 13½ and 2½ inches, respectively. Our Lou-lan figure shows the head and bust of a human female with a face suggesting a Persian type. The small upright curled wings attached behind the breast are reminiscent of Greek Sphinx wings, and seem to emphasize descent from a monster familiar to classical art. This human portion of the figure rises out of a half-open lotus, through which the transition is effected into the lower part showing the leg and hoof of a horse. The brilliantly preserved colours of the lacquered surface add greatly to the artistic effect of the carving. In discussing the Niya Site figure, of which ours might almost be called a replica, I have pointed out that the idea and shape of such composite monsters had already been borrowed by the Buddhist sculpture of Gandhāra from the classical West, as proved by the frequent appearance in it of those 'Ichthyocentaurs' which combine human heads and busts with such disparate members as birds' wings, horses' legs, and serpentine fish tails.[10] It is difficult at present to explain the exact purpose which was served by the black-lacquered bar fixed into a mortice at the back of the figure's head and by its wooden hinge. The same mortice is found also in the corresponding Niya Site carving. That the two uprights of L.B. IV. v had belonged to the same piece of furniture seems in any case highly probable, seeing that at N. xii, too, carved figures representing the two types of animal and semi-human monsters were found together in the same room and practically at the same spot.

Decorative carvings in quasi-classical style.

The other wood-carvings found in room v showed a style of decoration derived with equal clearness from classical art. The two panels L.B. IV. v. 0012, 0030 (Plate XXXIV) are particularly interesting. The first shows a very vigorous and graceful relievo decoration of the palmette type which could easily be mistaken for good Byzantine work. The second, about 16 inches long, looks like part of a wooden pilaster from a piece of panelling. The four hanging wreaths carved in low relievo and cinctured, which adorn its shaft, bear a curious late Roman appearance, and might fitly take their place as a specimen of Empire furniture. For smaller fragments see L.B. IV. v. 002, 004 (Plate XXXIV).

Miscellaneous finds in lacquer, ivory, etc.

Fragments of lacquered wood belonging to furniture or utensils turned up in great numbers (L.B. IV. v. 008, 009, 0014–16, 0022, 0027), and for some the technique or bamboo material distinctly suggests Chinese manufacture. This is certain in the case of L.B. IV. v. 0029, which belonged to a lacquered bowl of the same type as found in the ruined watch-stations of the Tun-huang Limes. The large ivory die, L.B. IV. v. 0034 (Plate XXXVI), 4½ inches long, is of interest, as it shows a shape and marking which is still common in India in dies used for divination. A similarly marked die, but much smaller, I had found in 1901 at the Niya Site.[11] The base of

[9] See *Ancient Khotan*, i. p. 336; ii. Pl. LXX.

[10] Cf. *ibid.*, i. pp. 336 sq.; also Foucher, *L'art du Gandhâra*, i. pp. 241 sq.

[11] Cf. *Ancient Khotan*, i. pp. 374, 411; ii. Pl. LXXIV.

a bronze cup, L.B. IV. v. 0031 (Plate XXXVI), is of curious shape and uncertain use. Among miscellaneous finds in wood, I will only mention the knife sheath, L.B. IV. v. 007, and the half baluster, L.B. IV. v. 0026, which suggests that this room may have had a decorative panelling similar in style to that of the small neighbouring ruin L.B. v. A textile relic of a kind not found elsewhere is the collection of small pieces of yellow felt, L.B. IV. v. 0032–33, painted on a tempera surface with floral and geometrical designs in a variety of colours.

Finds in apartments L.A. IV. vii, viii.

To the north-east of the rooms v, vi, and separated from them by a passage over eight feet wide, a larger apartment, vii, and a narrow closet, viii, could be traced. A portion of their timber and wattle walls still rose to a height of a few feet, owing to a thick protecting crust of dung which the photograph, Fig. 108, shows in course of removal. It is likely that these apartments represent all that remains of the private portion of the house which, lying to the north-east, has otherwise been demolished by the erosive action of the wind. The 'finds' made here were scanty, but included the fine fragments of decorative open-work wood-carving, L.B. IV. vii. 003; viii. 001, 002 (all in Plate XXXIV), with classical design in berried laurel leaves and palmette, to which reference has already been made.[12]

Wood-carvings from shrine L.B. v.

About thirty yards to the east there rose a small isolated terrace bearing on its top the previously mentioned remains, L.B. v, of what evidently had once been a shrine closely resembling L.B. II and of similar modest dimensions (Fig. 112). A great deal of timber débris strewed the eroded slopes, but it was all badly splintered, and only one foundation beam, about twenty-one feet long, lay still approximately *in situ*.[13] The character of the other big pieces could not be determined with certainty. However, carved fragments picked up among the débris clearly show that the constructive features and the ornamentation of the walls in the building must have been of exactly the same type as in L.B. II. Among these wood-carvings we have a beam, L.B. v. 0013 (Plate XXXI), decorated in relief with the same floral scroll as found in L.B. II. 0036; an open-work panel, L.B. v. 009 (Plate XXXII), showing the same four-petalled open lotus which is seen in L.B. II. 0016–17; a piece of heavy diamond trellis-work, L.B. v. 0012 (Plate XXXIII), of a type identical with that of L.B. II. 0028; another open-work panel with diagonal bars and wheels, L.B. 0018 (Plate XXXIII), similar to L.B. II. 0023–24; and also a series of lathe-turned balusters, L.B. v. 008 (Plate XXXIII), 0010, 0014–18, which differ from those found at L.B. II only by having seven instead of five ball mouldings, and in a few other unimportant details. A wooden rail from such a balustrade was also recovered, L.B. v. 0019.[14]

Such close agreement in the construction and style makes it highly probable that the small isolated ruin was a Buddhist shrine of the same period as L.B. II. This again raises the question whether the large and well-built residence L.B. IV adjoining it, with its relatively spacious rooms, may not have been originally intended to shelter a monastic establishment.[14a] Unfortunately we have no definite evidence to decide it. It is worth noticing, however, that this is the only place of the Lou-lan Site where clear surface proofs of ancient cultivation could be discovered. An extensive line of rush-fencing was traced to the north-east, half-hidden but also protected by the sand which had accumulated along it in a low, well-defined ridge. It first ran due north from L.B. IV and then turned to the east, enclosing what must have been a large garden or piece of cultivation. Within the line of the fence and near it we came upon fallen trunks of dead mulberry and Jigda trees. About eighty yards to the west of L.B. IV there lay in a row the withered trunks of eight big

Evidence of ancient cultivation.

[12] See above, p. 400.

[13] Dr. Hedin appears to have found the four foundation beams still joining each other, and gives the dimensions of the walls deduced from them as 5·60 and 6·60 metres (approx. 18½ and 21½ feet) respectively; see *Central Asia*, ii. p. 620.

[14] Some of these pieces were found lying on the surface of L.B. IV. iv, where they had evidently been carried and then left behind by Dr. Hedin's men.

[14a] But see below, p. 415, for a Kharoṣṭhī letter found at L.B. IV, and addressed to a Guśura.

Tereks or poplars of the cultivated variety (*Populus alba*), the only specimens I had seen at the site. One trunk measured forty-seven feet in length, with a circumference of six feet. Their size clearly showed that at this point, in any case, cultivation must have gone on for a long time before the site was abandoned.

Remains at L.B. VI.

On December 28 I visited the ruins which Dr. Hedin's reference had enabled me to trace about half-way between L.B. IV–V and the Stūpa first seen on our approach to the site.[15] I found them to be situated about two and a quarter miles in a straight line to the E.S.E. of L.B. IV (see Plate 22), and their remains very scanty. Close to a belt of dead Toghraks a small wind-eroded ridge, running from N.E. to S.W., bears the badly-decayed remains of two structures built partly of burnt bricks and partly of the usual timber and wattle. The one to the north-east, L.B. VI, showed a small brick-built room, about $15\frac{1}{2}$ feet square, enclosed by walls three feet thick and still rising to a height of over two feet, on a foundation of tamarisk bundles. The ground beneath the N.E. wall was undercut by erosion. The bricks measured 16″ × 10″ × 2″ and were laid in single courses alternating with layers of stamped clay. Adjoining the S.W. wall was one of timber and wattle, about eleven feet long in its extant portion, of which the foundation beam was at one end overhanging the eroded slope.

Relics of Buddhist shrine.

On clearing the interior of the cella we found in the southern corner several small and very friable fresco fragments, painted in tempera on mud plaster. The largest of them, L.B. VI. 002, now reduced by vicissitudes of transport from six to about three inches across, shows white leaves with scalloped edges on a pale green ground. On the eroded slope outside this corner there were recovered, besides some undecorated pieces of wood-carving, two trellis-work panels, L.B. 0019. a, b (Plate XXXIII), showing a screen pattern of diagonal bars and wheels, which resembles that of similar panels from L.B. II and V; also a wooden block, L.B. VI. 001 (Plate XXXII), decorated in relievo with an eight-petalled lotus. The design corresponds closely to that of the carved flower from the cella entrance, M. V. 0012 (Pl. XLVII), and that of the other represented on the lintel of the palace gate in the painted frieze of the Mīrān temple M. V. (Fig. 134; see below, pp. 514, 518). These finds, scanty as they are, make it quite certain that the structure had contained a small Buddhist shrine. The other building, occupying the south-west end of the same eroded terrace and about twenty yards off, seems to have been larger, but had suffered even more decay. Only on the south-west side could a line of wall, about twenty-seven feet long, be distinguished, marked by a single course of burnt bricks which seem to have served as a foundation. Among the confused heap of timber near it there were massive beams showing lengths up to twenty-five feet and a thickness of fourteen by ten inches.

Ancient brick-kiln.

Plentiful pottery débris of the local type strewed the ground close to these two structures and towards the shapeless mound of sun-dried bricks which was found about a furlong further east, and which evidently marked the position of a completely decayed Stūpa. It measured at its base about 30 feet from N.E. to S.W. and 18 feet across. Its top rose about 11 feet above the original level of the ground. About half a mile to the south-west of this Stūpa remnant, going over ground where potsherds were abundant, I found another mound about 35 feet in diameter which, by the successive layers of charred tamarisk wood and brick fragments cropping out all round its sides, could be clearly recognized as an ancient brick-kiln. Its maximum height above the original ground was about eight feet. But the latter now showed as a terrace, quite 16 feet high on the south-west, owing to the depth of wind-erosion. Mounds of this origin were familiar enough to me from the vicinity of old cities in Northern India, where, as round Lahore, they often form a conspicuous feature of the environs. But in the Tārīm Basin, where the extreme dryness of the

[15] See Hedin, *Central Asia*, ii. pp. 627 sq.

climate makes the use of sun-dried bricks far more common, they are very rare indeed.[16] Hence I am inclined to look upon this old brick-kiln of the Lou-lan Site as another significant indication of the strong influence which was exercised here by Chinese occupation.

Departure from Lou-lan Site.

With the completion of these surveys all that could be done, for the present, at this site was finished. Such reconnaissances as I had previously been able to make through Rai Rām Singh and the two Loplik hunters had failed to reveal within striking radius any other structural remains still awaiting excavation. This negative result had made it possible to arrange my programme of movements, and by the evening of December 28, when the ruins of L.B. i–v had, by a kind of re-burial, had their protecting covering of sand restored to them, I felt relief at the timely arrival of the camels ordered back from the salt spring on the north-west. Eleven days of constant toil, carried out under such trying conditions, had just sufficed for the completion of our tasks, but also wellnigh exhausted the endurance of the men. Recurring cases of illness among them showed how the constant exposure to icy blasts, with hard work by day, inadequate shelter at night, and necessarily scanty rations of water, was telling on them. The hoped-for supply from the spring having failed, our ice-store was running very low, and this fact alone was enough to force me reluctantly to abandon any hope of extending my explorations by a move along what I conjectured to have been the ancient Chinese route leading eastwards. It was time for us all to return to ground where water was to be found, and to leave to the future that plan of extended explorations which brought me back to this dead desert region in the winter of 1914.

Section VIII.—CHINESE DOCUMENTS FROM THE LOU-LAN SITE

In the preceding portions of this chapter I have endeavoured to record all the facts concerning the site yielded by my excavations and surveys on the spot, and by the subsequent examination of the antiques brought to light there. It still remains for me to review the data concerning the ancient settlement which can be gathered from the documents discovered there, and to elucidate the evidence that the Chinese historical records may furnish as to its character and origin.

Chinese documents elucidated by M. Chavannes.

From the first, the abundant finds of Chinese documents which rewarded the clearing of those ancient refuse-heaps near the ruined 'Ya-mên' of L.A., and the very place of their discovery, had encouraged me to hope that historically interesting data might be gleaned among them. This expectation has been justified by the information which M. Chavannes' painstaking and lucid interpretation of all but the most fragmentary and obscure of these records has rendered accessible also to those who are not Sinologists.[1] My gratitude for this very valuable help, and for the generosity with which M. Chavannes placed it at my disposal even before publication, must be all the greater because the archaic and often very cursive script, the poor preservation of numerous pieces, and the nature of the contents, too often fragmentary and bristling with intricate administrative details, have made the decipherment a task of exceptional difficulty. It is solely on the strength of M. Chavannes' exhaustive treatment of these documents that I can attempt here to focus, as it were, the glimpses which they reveal as to the historical character and the local conditions of the site.

Chinese garrison located at L.A.

In the first place, the nature of the great bulk of the documents conclusively supports the view, derived from archaeological evidence, that the principal group of ruins, L.A., belongs to a small fortified station, garrisoned by Chinese troops and intended to guard the important ancient route

[16] At none of the old sites of the Khotan region from Rawak to Endere did I see any traces of brick-kilns. Yet at all of them fuel must have been abundant in ancient times.

[1] See Chavannes, *Documents*, pp. 155–98, Nos. 721–939.

which led from Tun-huang, on the extreme west of Kan-su, to the main line of oases north of the Tārīm River. From passages of the Chinese Annals which we have already had occasion to discuss,[2] it was certain in a general way that the first expansion of Chinese influence into Central Asia had proceeded by a route which was opened about 110 B.C. through the desert west of Tun-huang to Lou-lan or the Lop region, and that this route had remained in use through the whole of Han times. But as renewed reference to those passages will presently show us, the indications available in the texts would not by themselves suffice to determine the exact direction of the route. Strong as the archaeological evidence was which pointed to the 'Lou-lan Site' as the western terminus of the desert route, confirmation by documentary evidence was particularly needed to meet the serious doubts which the absolutely barren nature of the desert further east was bound to raise about the correctness of such a location of the route.

Importance of ancient silk trade route.

From all that the Chinese Annals have to tell us, and from broad geographical facts which remain unchanged to the present day, it is clear that, throughout the successive periods of China's control of the Tārīm Basin, it was always the great route leading along the southern foot of the T'ien-shan and through the string of big oases from Korla westwards to Kāshgar which claimed most importance for Chinese traders, administrators, and soldiers. It was by this route, the *Pei-lu* or 'Northern Road' of the Annals, that the bulk of the silk trade, for the sake of which the first advance of Chinese political and military power into Central Asia was made, moved to Farghāna or *Ta-yüan* and into ancient Sogdiana and Bactria.[3] The protection of this great trade route against the inroads of the Huns and their nomadic successors north of the T'ien-shan was the main purpose for which the Tārīm Basin was held, and it always remained the chief aim of the Chinese administration set up in the 'Western Countries'.

Shortest line passes Lou-lan Site.

A reference to the map suffices to show that the shortest way to reach that line of oases from Tun-huang, the westernmost cultivated area on the Kan-su marches of China, lay along the foot of the Kuruk-tāgh and through the Lop desert, past the 'Lou-lan Site', to where the Tārīm bends south-eastwards. But nowadays a marching distance of over two hundred and forty miles of wholly waterless desert, even on the most direct line, intervenes between the last-named point and the nearest well on the Tun-huang–Charkhlik caravan track, and this would render the use of the ancient route wholly impracticable for caravan traffic at the present time.

Difficulties of ancient desert route.

In Han times and in the century immediately succeeding, it is true, the existence of the Kuruk-daryā delta, just as it accounts for the occupation of the 'Lou-lan Site', also removed all difficulties about water and grazing for the western half of that distance; for there the ancient route undoubtedly led along the bed of the 'Dry River', then still carrying water, to Ying-p'an, where in 1915 I traced ruins of the same early period, within easy reach of the present Konche-daryā. But for the eastern half of the old route, the hundred and twenty odd miles separating the ruins of the 'Lou-lan Site' from the Kum-kuduk wells on the Tun-huang caravan track, the total absence of water must have been as serious an obstacle in ancient times as it now is. It was only by my explorations of 1914 that definite archaeological proof was obtained for the ancient Chinese route having actually crossed this most formidable of deserts, a wholly lifeless waste of salt and clay, and meanwhile we should have found it hard to believe in the possibility of such a route having ever been followed by those early pioneers of Chinese trade and influence westwards, had the fact not been so clearly proved by the documents recovered from the site.

Documents proving occupation, A.D. 263–70.

The physical change which has come over this portion of ancient Lou-lan by the drying-up of the delta to which it once owed water and life is so striking and of such wide geographical interest

[2] See above, pp. 336 sqq.

[3] Cf. the extracts from Ssŭ-ma Ch'ien's history in Kingsmill, *Intercourse of China*, *J.R.A.S.*, 1882, pp. 4 sqq.

that we have special reason to feel grateful for the number of exactly dated documents, which enable us to fix with sufficient accuracy the lower chronological limit of the occupation of the site. Among the records analysed by M. Chavannes there are not less than fifteen dated from years corresponding to A.D. 263-70, and all of them found at L.B. II or in the refuse-heaps adjoining this 'Ya-mên'. Only two, *Doc.* Nos. 738 and 721, belong to the years A.D. 263 and 264 respectively, bearing 'nien-haos' of the closing reign of the Wei dynasty, and the rest to the years A.D. 265-70, which are comprised in the initial regnal period, *t'ai-shih*, of the Emperor Wu-ti, the founder of the Western Chin dynasty.[4] Of him we know from the *Chin shu* that he reasserted Chinese supremacy in the 'Western Countries' after the period of internal disruption in the empire known as the 'Epoch of the Three Kingdoms' (A.D. 221-65).[5] As the dates on the documents found by Dr. Hedin, according to Herr Himly's preliminary notice, appear also to be confined to the years A.D. 264-70,[6] we may safely conclude that this was a period when the desert route and the station guarding its western end saw exceptional traffic and activity.

Last dated records of A.D. 312 and 313.

Throughout the reign of the Emperor Wu-ti (A.D. 265-89) the continued political relations with the Western Countries are attested by notices of the Chin Annals, which, between A.D. 270 and 287, repeatedly mention embassies with tribute from Central-Asian territories even as distant as Ta-yüan (Farghāna) and K'ang-chü (Samarkand). Thus in A.D. 283 we learn that the young son of a Shan-shan or Lop chief was sent to the imperial court for service.[7] After his reign these relations are declared to have completely ceased.[8] But that Chinese occupation at the Lou-lan Site did not come to an end with that reign is proved by two of our documents, Nos. 910 and 886, which record dates corresponding to A.D. 312 and 330. The last named is a slip found in L.A. I, recording a payment of money to a certain *hu* or barbarian.

Use of obsolete *nien-hao*.

It is interesting to note that the very way in which this latest date is recorded conveys a clear indication of the final abandonment of the site then being near. The year is stated as the eighteenth of the 'nien-hao' *Chien-hsing*, which commenced in A.D. 313. But as this ended in A.D. 316 together with the reign of the last emperor of the Chin dynasty whose sway extended over Northern China, it is clear, as M. Chavannes has rightly recognized,[9] that the little station must by that time have been completely cut off from official intercourse with the central authorities of the empire and abandoned to its own resources. Only thus is it possible to explain that, in its isolation, the post continued using the obsolete 'nien-hao', the abrogation of which could not be notified to it, for fully sixteen years longer.[10]

Documents naming '*Chang-shih* of the Western Countries'.

Yet we should not be justified in assuming that this condition of administrative isolation was merely local. That it must also have affected other Chinese garrisons surviving in the Tārīm Basin is rendered highly probable by a number of significant observations. The ruined site could not have been a mere outlying post; it must have lain on an important line of communication for the refuse-heap adjoining a single 'Ya-mên' to furnish four fragmentary documents which directly emanate from, or are addressed to, the '*Chang-shih* of the Western Countries', i.e. the chief representative of Chinese authority in the Tārīm Basin. No. 752 communicates an order received and forwarded by the *Chang-shih* for an officer to start by a specified date and proceed to certain

[4] See Chavannes, *Doc.* Nos. 722-27, 730, 739 (A.D. 265-69); Nos. 733, 735, 736, 748, 896 (all A.D. 270).

[5] Cf. M. Chavannes' note on China's political relations with Central Asia under the Emperor Wu-ti, *Ancient Khotan*, i. p. 537.

[6] Cf. Herr Himly's note, quoted from Petermann's *Mittheilungen*, 1902, pp. 288-90, in Hedin, *Central Asia and Tibet*, ii. p. 144.

[7] See M. Chavannes' note in *Ancient Khotan*, i. p. 537.

[8] Cf. M. Chavannes' remark, evidently based on the *Chin shu, loc. cit.*

[9] See Chavannes, *Documents*, pp. 182 sq.

[10] For similar instances of the use of obsolete 'nien-haos' due to similar circumstances, cf. *Ancient Khotan*, i. pp. 275, 533.

localities still identifiable in Kan-su. Unfortunately the 'nien-hao' is missing and the wooden slip incomplete. Hence it is impossible to make sure whether the order referred to originated from the central authorities of the empire or from one of the local chiefs of the Chang family who, in the fourth century A. D., ruled as practically independent princes of western Kan-su.[11] Another fragment, No. 885, a mere 'shaving', names an officer 'in charge of official correspondence under the orders of the *Chang-shih* of the Western Countries'. In a third, No. 887, 'the general-in-chief, *Chang-shih* of the right [of the name] Kuan', is referred to. I have already,[12] on account of its archaeological interest, had occasion to mention the inscribed wooden lid, No. 751, which must once have closed a small box containing an official report or petition. It is in due form 'addressed to Mr. Chang, *Chang-shih* of the Western Countries, for transmission through the medium of Superintendent Wang [by] me Yüan who express myself in this letter'. The document itself, which judging from the shape and size of the lid is likely to have been written on wooden slips, may have been carried away by the *chancellerie* of the high dignitary. But the cover which was thrown into the 'waste-paper basket', to use an anachronism, remained behind for us to attest the great man's passage.

Letter of Li Po found at L.A. II.

We owe in all probability to a similar procedure the survival of the far more important document which, as already mentioned, Mr. Tachibana had the good fortune to light upon, in 1910, in the wall of the small room L.A. II. iv.[13] This find comprises, in addition to some fragments, a crumpled-up but complete sheet of paper containing what obviously is the rough draft of a letter sent by Li Po, *Chang-shih* of the Western Countries, to the king of Yen-ch'i or Kara-shahr. The same personage is mentioned by the *Chinshu* in connexion with events of the year A. D. 324. The purport of the letter, arranging a meeting with the king, clearly points to its having been written by Li Po on his passage into the Tārīm Basin, and the fact of a second copy of the rough draft, besides fragments connected with the latter, having been found in the same place makes it appear highly probable that Li Po's letter was actually dispatched from the Lou-lan station. It is thus safe to conclude that the old route leading through the desert and past the site was still in use at that date.

Other official correspondence.

An official communication, apparently emanating from a *Chang-shih* and reporting some fight, is the subject of an unfortunately incomplete tablet, No. 768. Better preserved is a letter on paper, No. 928, in which affairs of administration, involving movements of some high officials, are reported in a quasi demi-official fashion. An imperial edict is referred to in the fragment No. 902; an official promotion to high rank in No. 878 b. The remnant of an official report to a high military officer, No. 895, is of interest as mentioning Kuchā. We have references to notifications and other official correspondence also in Nos. 725, 821, 921, without the subject being made clear by the surviving context.

Petty administrative records.

Glimpses of military action are furnished by No. 765, where the movement of an army is reported in localities probably distant and not yet identified, and by No. 920, which reports on

[11] Cf. M. Chavannes' notes, *Ancient Khotan*, i. pp. 543 sq., on this Chinese family, which after the close of the Western Chin dynasty (A.D. 316) ruled the region of Liang-chou and the territories dependent on it as far west as Tun-huang or Sha-chou. *Chinshu* passages translated by M. Chavannes, *loc. cit.*, mention successful expeditions sent into Chinese Turkestān by two of these princes as late as A. D. 345 and 384. But there is nothing to prove that these proceeded through Lou-lan and not by the northern route via Hāmi and Turfān.

[12] See above, p. 382.

[13] See above, p. 377. According to M. Chavannes' note, *Documents*, p. 162, the document was reproduced in facsimile by Mr. Haneda, in the *Tōyō gakuhō*, fasc. 2, p. 54. It is also described in M. Péri's article, *B.E.F.E.O.*, x. p. 652.

I owe my knowledge of its character and contents to the translation and notes which M. Chavannes was good enough to communicate to me in 1910 after seeing a photograph of the document kindly placed at my disposal by Mr. Tachibana. This translation has been reproduced in Appendix *A*, as revised by M. Chavannes in 1913 with reference to M. Péri's article quoted above.

a fight seen from the top of a watch-tower. But the great majority of the official records are such as plainly indicate the modest range and humdrum nature of the duties carried out by those whose offices provided most of the 'waste paper' (*recte* wood) thrown on the rubbish-heap. We see clearly that their business was chiefly concerned with the maintenance in food-supplies, arms, and arable land of a small Chinese military station which was intended to guard and keep open one section of the earliest of the routes linking China with the Central-Asian outposts of imperial policy. Yet the very pettiness of the administrative routine which these records illustrate invests them with a distinct historical interest; for they throw light on practical details of organization which had their importance in the story of Chinese political expansion right across Central Asia, and which manifestly helped to maintain it for centuries in the face of vast distances and great physical obstacles.

Statements concerning granary.

Most of these documents are statements or orders which relate to the storage and issues of cereals by the officials holding charge of the local granary. We read in No. 759 of 'a superintendent of the granary respectfully submitting a specified list of the various cereals under his administration with a forwarding letter'. The provision of an adequate clerical staff for dealing with this branch of administration is attested by numerous slips mentioning accountants and other officials (see Nos. 728, 731–46). They also illustrate the elaborate system of control in use by showing the lists of those who had to check inventories and countersign issue orders or receipts. From detailed statements, such as Nos. 728, 729, 731, 734, 739–41, etc., recording issues to individual soldiers, petty employés, etc., or small detachments, we learn the daily rations of grain sanctioned per man. The long statement No. 928 acquaints us with the manner in which the accounts of grain issues were kept and checked. No. 798 is of special interest as mentioning rations issued to letter-carriers from Yü-t'ien or Khotan. Loan transactions of grain are referred to in Nos. 749, 766.

Orders about supplies.

Besides provisions for the local garrison, supplies had to be kept available for officials and others who passed through. Difficulties about supplies were bound to be caused by the limited extent of local resources in a colony situated, as this was, in a deltaic region ill adapted for permanent cultivation. Of this we have clear evidence in the document No. 826, in which the unnamed recipient is directed 'now, in view of the circumstances, to make fresh reductions in the rations of the general, the chiefs, the officers, and soldiers, and to draw up a list of these reductions, article by article'. Another fragmentary slip, No. 830, enjoins 'the gradual restriction of expenditure in order to make both ends meet'.

Orders for agricultural operations.

The demands for supplies arising from the traffic along a great trade-route must have made it doubly important from the outset to render the local garrison self-supporting. We know from the Han Annals that it was an essential part of the administrative policy followed by the Chinese from the very beginning of their military penetration of the Tārīm Basin to turn the troops which were to assure their hold upon important points into military colonists and thus to facilitate their maintenance.[14] We find striking confirmation of the systematic efforts made for this purpose in those records of the Lou-lan Site which concern agricultural operations. The well-preserved tablet, No. 753, gives details of the allotments of lands, either already irrigated or prepared for it or yet to be cleared, which are to be made to specified sections of troops for purposes of cultivation. Particular orders about sowing operations, etc., are contained in No. 925. In No. 882 a superintendent of agricultural labours is referred to. No. 760 is a specific order issued to the chief of a certain section about the irrigation of a hundred acres in the *Pei-ho* 北河 tract.[15] No. 774 enjoins the abundant planting of vegetables for the sake of winter provisions. That the agricultural implements for these

[14] Cf. Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.* x., pp. 22 sq., 27.

[15] *Pei-ho* means literally the 'northern river' and may well be a local designation intended for an area of cultivation on a northern branch of the ancient Kuruk-daryā.

operations were issued to the soldiers from a central store is definitely proved by inventories of hoes, spades, saws, etc., as contained in Nos. 779–81, 787, 791, 891. In the first-named of these documents the designation of 'barbarians' hoes' may well refer to the broad-shouldered hoes known as *ketmans* which are now used everywhere throughout the Tārīm Basin by the local cultivators but unknown to the Chinese agriculturists.

The importance which the proper maintenance of canals and of dykes intended to feed them must have possessed for the colony need not be specially emphasized. We find evidence of it in several documents. A prefect of water, corresponding to the present 'Mīrāb Bēg' of a Turkestān oasis, is mentioned in No. 888 in connexion with a requisition for ropes. No. 761, unfortunately fragmentary, is of interest as reporting on the condition of an irrigation embankment which is stated to have been breached in six places and to have been overflowed by the water. The report is an apt illustration of the danger which always threatens agriculture in the low-lying deltas of Turkestān rivers. On the other hand, the mention of five hundred and one men being at work on the embankment shows that the resources of labour for coping with this risk were not altogether insignificant. In No. 754 the return of a certain soldier charged with watching a dyke is urged. Of another risk, very different in character and yet in its origin connected with the same deltaic conditions, we obtain a glimpse in No. 750. In this letter a certain Chao Pien, who styles himself an assistant to the prefect, reports that the guardians of the flocks passed the night south of the town and on a certain date reached water. It appears to have been a case when particular tracts of riverine jungle had become useless for grazing, owing to the water-supply running dry in consequence of a diversion of the river channel, and the flocks had to be sent some distance in search of sufficient water. Records relating to irrigation.

That the peaceful preoccupations of those in charge of the colony did not altogether efface its military character is shown by documents, of which Nos. 758, 775–77, 794, are examples, containing reports on arms such as cross-bows or sword-blades no longer serviceable, on leather pieces prepared for armour and helmets, and on brass rings for securing prisoners. The numerous inventory records, etc., referring to medicines, No. 782–85, 790, 795–96, are also likely to have come from some military store-keeper's office, in view of what subsequent finds have shown us about the medical care taken of the soldiers along the Tun-huang Limes.[16] It is of some historical interest to note that in a number of cases where individual soldiers are specified we find them described as 'barbarians' or *hu* (see Nos. 763, 804, 844–46, 892), and that all those whose nationality is exactly indicated are stated to be [*Ta Yüeh*]-*chih* 支, i.e. Indo-Scythians.[17] We may safely conclude that of the mercenaries employed under Chinese officers at this station, and probably also at other and more important garrisons of the 'Western Kingdoms', a considerable proportion was drawn from that foreign nation which in Chinese eyes had the merit of representing the descendants of the hereditary foe of the Hsiung-nu or Huns. Military reports, etc.

A well-known record of the Former Han Annals tells us how the 'Great Yüeh-chih', the later Indo-Scythians, had been driven by the Huns in the second century B.C. from the plains north of the Nan-shan, first to Sogdiana and thence to the region of the Middle Oxus, the ancient Bactria and later Tokhāristān.[18] It is there that the Later Han Annals place the main seat of their power even after their conquests under the Kushān dynasty had extended south of the Hindukush and into the North-west of India.[19] Our knowledge of the conditions in which the Great Yüeh-chih dominion on the Middle Oxus maintained itself until the advent of the White Huns, or Ephthalites, *Ta Yüeh-chih* soldiers in Chinese pay.

[16] See below, chap. xx. sec. vi.

[17] Cf. M. Chavannes' note, *Documents*, p. 178, note on No. 846.

[18] Cf. Specht, *Journal Asiat.*, 1883, ii. pp. 320 sqq.

[19] See Chavannes, *Les pays d'occident*, *T'oung-pao*, 1907, p. 189, note.

early in the fifth century A.D. is too scanty to permit of any definite opinion being formed as to the racial composition of the people from that region to whom the Chinese in the 3rd–4th century A.D. continued to apply, in a quasi-archaic fashion, the designation of 'Great Yüeh-chih'. So much, however, is clear that as long as the inroads of the Huns established north of the T'ien-shan remained a constant danger to the northern oases of the Tārīm Basin and the great route leading through them, Chinese political wisdom could not fail to realize the advantage of enlisting troops from the powerful western neighbours whom the common danger threatening from the Huns was likely to make trustworthy. This expedient was bound to recommend itself particularly in view of the unwarlike character which the population of the Tārīm Basin seems to have borne, then as now, and of the complications likely to arise from those internal intrigues and rivalries which the Later Han Annals prove to have been so frequent in the 'Western Countries'.[20] The tradition established by such a system is likely to have continued into Chin times, even after the danger from the Huns had receded, and amply suffices to explain the appearance of Indo-Scythian mercenaries so far away to the east. It should be noted that we meet with references to individuals of 'Great Yüeh-chih' origin also among the approximately contemporary Chinese records found at the Niya Site.[21]

Reports on soldiers' affairs.

But it is only indirectly that, here and there, some evidence of Chinese Central-Asian policy can be traced in the office records which survived at the Lou-lan station. The military incidents they mention mainly concern petty cases of individual soldiers. Thus the report contained in No. 764 accuses an officer of culpable negligence for not having accompanied a certain unhappy soldier who, in consequence, fell into the water and was drowned. No. 763 acknowledges the receipt of a verbal order, brought by a barbarian soldier, for an advance to be made. Elsewhere we learn of men who have escaped *en route* (No. 815), or we are furnished with details as to a barbarian soldier's kit including a felt dress, etc., as recorded on a slip which shows signs of having been attached to a parcel (No. 804; also 832).

Rare references to trade.

Whatever the explanation may be, we find few indications of trade passing through the station at that period. A tribute in silk pieces sent by a certain barbarian is specified in No. 903, and the references to fabrics in Nos. 805, 812, 814, probably concern the same staple commodity. Transport by camels and donkeys seems to be alluded to in Nos. 839–41; the inspection of a cart and bullocks at a camp is mentioned in No. 755.

Private letters.

The paucity of references to trade is set off, to some extent, by the evidence which the remains of private letters supply as to continued intercourse towards the east and the west. It is worthy of note in passing that all documents which can safely be recognized as private letters appear to be written on paper, a circumstance to be accounted for on the one hand by the greater convenience of the new writing material, and on the other by the less conservative ways of personal as compared with official correspondence. In No. 912, a letter dated A.D. 312, the writer mentions departure from the *Yü-mên kuan*, or Jade Gate barrier, which was situated, as we shall see, on the direct route towards Tun-huang. No. 918 is a letter dated from Tun-huang itself, and No. 914, the fragment of another, mentions trade at Tun-huang. In No. 923 we seem to have the remnant of a letter addressed to a traveller making his way to the 'Western Countries' by a person left behind in the east.

Letters mention Yen-ch'i.

When we turn to letters evidently written from the west, it is interesting to find the affairs of Yen-ch'i or Kara-shahr repeatedly referred to. In No. 930 a certain Hsüan, a native of Yen-ch'i,

[20] 'Three indigenous soldiers from Kao-ch'ang' or Turfān are mentioned in No. 928. But these men may have been detached on some mission by the local ruler of Turfān.

[21] Cf. M. Chavannes' translation of N. xv. 53, 191, *Ancient Khotan*, i. p. 540.

gives fairly detailed news to two official friends about the movements of some highly-placed officers, including the *Chang-shih.* Nos. 931–32 seem to have been received by the same person, a 'superintendent of the post', Wang Yen-shih. No. 934 reports political events in which Ts'ang, king of Yen-ch'i, was implicated, and also mentions Kuchā. In No. 935 we learn of a declaration of war. Among private letters of purely personal contents, No. 904 is of special interest as it is complete and was found in its original form, rolled up for dispatch. In it a young unmarried lady, who has started on a journey westwards, sends news and good wishes to an uncle she has left behind, perhaps, at the ruined station. A more pathetic chord is touched in the large fragment of a letter, No. 926, which contains effusive complaints of a wife about the dissolute ways of a faithless husband.

Lou-lan named in documents.

If I have left it to the last to mention the records containing the name of *Lou-lan*, it is merely because of the important bearing they have on the question, to be discussed in the next section, of the original designation of the site. No. 754 is of special interest because, though not absolutely conclusive, it makes it appear very probable that the name Lou-lan was applied in the 3rd–4th century A.D. to the military station represented by the ruins of L.A. In this tablet (L.A. III. i. 16) a subordinate officer respectfully reports to a superior that 'an official letter has previously been sent to Lou-lan to request that the soldier Lien charged with the watching of the dyke be sent back here'.[21a] It is obvious that we have in this document a kind of demi-official 'reminder', and that the refuse-heap in which it was found is probably identical with the *Lou-lan* to which the original official application had been addressed. No. 922 gives some support to this conclusion. It is an application, apparently presented in person to a certain accountant Chang, who appears to be named also in other records from L.A. VI. ii,[22] by one Pai Su-yün, a native of Lou-lan. In No. 907, a small fragment where the local name is met with a third time, the context is uncertain. To this must be added the evidence furnished by the mention of Lou-lan in four of Dr. Hedin's records from L.A. II, to which brief references are made in Herr Himly's paper.[23] In two of these Lou-lan appears to be named as the place of receipt for letters.

SECTION IX.—KHAROṢṬHĪ DOCUMENTS FROM THE LOU-LAN SITE

Importance of records in Kharoṣṭhī.

When describing the excavations which at numerous ruins of the Lou-lan Site brought to light Kharoṣṭhī documents on wood and paper, I have already had occasion to allude to the special historical interest attaching to their discovery. The frequency of these finds and the observations I was able to make on the spot as to their outward appearance and apparent character seemed to justify my drawing at the time the important conclusion that the same Indian language found in the records of the Niya Site had also been regularly used, at that early period, in the Lop region for indigenous administration and business.

Considering how far removed Lop-nōr is from Khotan, this assumed uniform extension of an Indian script and language to the extreme east of the Tārīm Basin was bound to raise fresh problems. In the Khotan region it seemed possible to account, at least partially, for this official use of an Indian language by the old local tradition, preserved in Hsüan-tsang's *Hsi-yü-chi* and the Tibetan 'Annals of Li-yul', which mentions early immigration from India as an important element in the local population.[1] But so far away to the east, at the very threshold of China, the

[[21a] But see *Corr. & Add.* for a note by Mr. L. C. Hopkins on the translation of this passage.]

[22] Cf. Nos. 742-44.

[23] See Petermann's *Mittheilungen*, 1902, pp. 288–90, quoted by Hedin, *Central Asia and Tibet*, ii. pp. 143 sq.

[1] Cf. for this tradition *Ancient Khotan*, i. pp. 156 sqq., and for its bearing on the script and language proved by the Niya documents to have been in official use in the Khotan region, *ibid.*, i. pp. 368 sq.

sufficiency of this explanation for the same use of a foreign administrative language might well be open to doubt.

Use of Prākrit in Tārīm Basin.

In the present inadequacy of our historical data it is impossible to assert whether a better solution of the problem is to be looked for in the spread of Buddhism, which may have carried the language and script prevalent in the extreme north-west of India with it into common use throughout the Tārīm Basin; or whether in this adoption of a Prākrit language, closely allied to that current on the Indus in Kuṣana times, we ought perhaps to recognize a lasting impression left by that temporary extension of Indo-Scythian power from across the Pāmīrs of which we catch dim glimpses from Buddhist tradition in China.[2] But seeing the importance of the question raised, I feel all the more gratified by the fact that the conclusion first drawn on the spot as to the language and character of the Kharoṣṭhī documents from the Lou-lan Site is now fully confirmed by the careful examination which Professor Rapson has been able to make of them since my return in 1909.

Language same as in Niya documents.

The abstract of the contents of these documents with which Professor Rapson has very kindly supplied me embodies the main results of his decipherment down to December, 1916, and makes it perfectly clear that in character, language, phraseology, and other respects they show the closest agreement with the Kharoṣṭhī documents brought to light in so much greater numbers from the ruins of the Niya Site. Just as there, we have a variety of deeds, letters, official orders, lists, and the like worded in the same early Prākrit dialect with an admixture of queer Sanskrit phrases in complimentary introductions, etc. Peculiarities of style, phonetics, and spelling leave no doubt as to identical standards having been followed by the *chancelleries* from Khotan to Lop at the period to which the records of both sites belong. Many, if not most, of the personal names which we meet in the Lou-lan Site documents occur also in the Niya series, though this does not, of course, imply identity of the individuals. Just as in the Niya series, we find numerous names of unmistakably Buddhist or Indian derivation, such as Anaṃdasena, Bhatiśam̄a, Bhimaya, Budhamitra, Dhaṃñapala, Kumudvati, Puṃñadeva, Caraka, Rutra, Sujada, Vasudeva, side by side with others which seem of local origin, e. g. Cauleya, Cuvalayina, Kapǵeya, Kalpiśa, Kipṣa, Kitsaitsa, Laṃpurta, Maldraya, Porbhaya, Pulkaya, Signaya, Tasuca, Tameca, Varpeya. The official titles of Cojhbo, Guśura, Kori, Vasu are common to both Lou-lan and Niya records.

Personal Names.

Dates in regnal years.

The rectangular double tablets L.A. iv. ii. 1, 2, 3 contain deeds, and in accordance with the practice uniformly observed in such formal records are exactly dated in regnal years. But only in the case of L.A. iv. ii. 2 (Plate XXXVIII), which relates to a transfer of land by one Sigayita to a woman Kosena, can the name of the reigning king be made out with certainty. He is designated as *Maharaya Aṃgoka devaputra*. His name and style curiously recall the *Maharaya Jiṭu[ṃ]gha Aṃkoñga* [or *Aṃvaga*] *devaputra* mentioned in the dates of two rectangular tablets from Niya, N. xxi. 6. a, 7+4, full transcripts of which Professor Rapson's kindness has made available to me in the proofs of his and Messrs. Senart and Boyer's text publication now passing through the press. In view of what has been shown above as to the dependence of the territory of Ching-chüeh, of which the Niya Site represents the chief place, upon Shan-shan or the Lop territory,[3] there is a temptation to assume that the same ruler is meant in the records of both sites.

Locality of *Kroraina*.

Though in L.A. iv. ii. 3 the year and name of the reigning king can no longer clearly be read, this document is of considerable interest. It contains a deed recording the sale of a piece of land by Camaka, a man of Kroraina settled at Calmadana,[4] and conveying full rights of possession to

[2] Cf. *Ancient Khotan*, i. pp. 55 sq.; also above, p. 243. To the references there given may be added S. Lévi, *Notes sur les Indo-Scythes* (reprint from *J. Asiat.* 1896–97), p. 63.

[3] See above, p. 219. This dependence is attested by the *Wei lio*, composed between A.D. 239–65, for a period which immediately precedes that covered by the dated Chinese records of the Lou-lan Site.

[4] For the identity of *Calmadana* with Charchan, cf. *Ancient Khotan*, i. p. 311, note; above, pp. 296 sq.

the purchaser Yapǵu[5] and his sons, Laṃpurta, Puṃñadeva, Dhaṃñila, and Dhaṃñapala. The land is described as situated at *Kroraina* 'in the south of the great town'. This local name, with a slight difference of spelling, is mentioned again in two other documents from the site, and one of them leads us to what I believe to be a likely identification of it. In L.A. vi. ii. 0234, an almost complete paper document reproduced in Plate XXXIX, we have, as Professor Rapson's abstract shows, a personal letter addressed by Vasudeva to his father, 'the great Guśura Bhatiǵa'. In it the writer, after the usual complimentary formulas, states that he came to a place, subsequently referred to as 'this market', from *Krorayina*, bringing a camel and some other property not yet identified. 'So far I have done no buying or selling. I now wish to return to *Krorayina*.' Leaving aside the remaining contents, which have not as yet been completely deciphered, we can scarcely go wrong in assuming that, as Professor Rapson himself has duly recognized, by Krorayina or Kroraina was meant here the locality where the letter was found, i. e. the Lou-lan Site.

Kroraina named in L.B. iv. records.

That the term was not restricted to the ruined station L.A., but equally applied also to the surrounding tract, is made very probable by the third document in which the name occurs, the double wedge-tablet L.B. iv. v. 1+vi. 1. This is addressed to Kori Maldraya and the Śramaṇa Anaṃdasena (Ānandasena), and conveys the king's order that the farm of Caraka at *Kroraiṃna* is to be handed over to a certain Kalaṣḍha together with a woman belonging to it. Now the mere fact of this last-named document having been found at the ruin L.B. iv, and thus quite seven miles away from the ancient station L.A., would suffice to suggest that the name Kroraina[6] had a more extended use and was borne by the whole abandoned settlement. And this impression is indirectly strengthened by another record from the same house, which shows that the Śramaṇa Anaṃdasena must have actually resided for a time at L.B., presumably while effecting the chief's order. It is a letter, which has also an interest of its own, contained in the rectangular double tablet, L.B. iv. i. 6+7 (Plate XXXVIII), and addressed from Cuvalayina and his wife Atamsiyae to his father, the Guśura Leśvaṃna, and his mother Bhuvidanoe. It conveys to the parents the glad news that Atamsiyae has been safely delivered of a son, and, after referring to several items of information sent by one Poniǵana, tells them that the Śramaṇa Anaṃdasena intends to visit them, and that if he does, great attention may be paid to him. Considering that this private letter and the double wedge-tablet entrusting to the Śramaṇa Anaṃdasena the execution at Kroraina of an official order from the king were found in the same ruined dwelling L.B. iv, it seems safe to conclude that this western portion of the ancient settlement was also comprised in Kroraina.

Lou-lan transcribes *Kroraina*?

The evidence recorded at the end of the preceding section has shown us that in the Chinese documents recovered from L.A. the ruined military station is designated by the name of *Lou-lan*. On the other hand, the Chinese historical records discussed above in Chapter IX, and below, too, make it perfectly clear that this name had also a wider application, being borne originally by that Lop tract which lay on the ancient route leading north of the terminal Tārīm marshes.[7] It is obvious that this term *Lou-lan*, which already figures in Chang Ch'ien's report, the earliest Chinese account of the Tārīm Basin, must reproduce an indigenous local name, and in view of the identity

[5] It seems difficult not to connect this name *Yapǵu*, which occurs as a personal name also in Niya Site tablets, e.g. N. xviii. 1, N. iv. 3, 6, 29. a, with the ancient Turkish princely title of *jabgu*, which was rendered by the Chinese as *hsi-hou* (**yap-hou*) 翖侯. This title (first recognized in its origin by Prof. Hirth) was in use among the Huns already in the second century B.C., and is attested also for chiefs of the Great Yüeh-chih at the time of their settlement in the Oxus region; cf. Chavannes, *T'oung-pao*, 1907, p. 189, note 3; Marquart, *Ērān-šahr*, p. 204. Parallels of such use of honorific titles for personal names are common in India.

[6] The form *Kroraiṃna* is only a graphic variation of *Kroraina*. The insertion of the Anusvāra mark, without any phonetic reason, in the case of an Akṣara followed by a nasal is of very frequent occurrence throughout these texts; thus *Khotaṃna* for Khotana; *jaṃna* for *jana*, etc.

[7] See above, pp. 336 sqq.; below, pp. 417 sqq.

of the ground designated I am tempted to recognize this original form of the name in the *Kroraina* or *Krorayina* of our Kharoṣṭhī documents. If we take into account the difficulties which attend all rendering of foreign names by Chinese sounds, and the total absence of any system of transcription before the attempts made in T'ang times, *Lou-* for *Kro-* is as close a phonetic reproduction as could be expected, seeing that the semi-vowel *r*, which is wanting in Chinese phonetics, is regularly replaced by *l*. In the same way *-lan* may be recognized as a sufficiently close approximation to *-raina* or *-rayina*.

Section X.—THE LOU-LAN SITE IN CHINESE HISTORICAL RECORDS

History of Lop region.

It remains for us now to consider those notices in the Chinese historical records which either can throw light on the origin and character of the ruined settlement of the Lou-lan Site, or else themselves derive elucidation from the archaeological evidence secured by its exploration. In dealing with these notices it will not be necessary for us to review afresh the data, already fully discussed in Chapter IX, which bear on the history of the Lop region in general and on the importance which the ancient route leading through it possessed for the early expansion of Chinese trade and political power into the Tārīm Basin. It is, however, essential to bear in mind the results there established[1] if we are rightly to interpret the historical notices which directly concern the ruined site. We have seen that the territory which the Chinese of the Former Han knew first by the name of Lou-lan and then, from 77 B.C. onwards, by that of Shan-shan, comprised the whole Lop region. Though its political centre appears to have lain in the south, at least from the date just mentioned, the district of greatest importance for Chinese trade and policy was the ground north, between the foot of the Kuruk-tāgh and the terminal Tārīm marshes, through which the most direct route from Tun-huang to the northern oases of the Tārīm Basin passed.

Ancient route through Lou-lan.

The Annals of the Former Hans, though giving in some detail an account of Lou-lan and of the political events which it witnessed, do not furnish us with any definite indications as to the exact line followed by this important ancient route through the north-eastern portion of Lou-lan. It was thus left for my explorations of 1914 to prove, by the certain location of the 'White Dragon Mounds' and the discovery of the Chinese terminal *castrum*, built where the ancient route first touched inhabitable ground west of the dried-up salt lake and at the time of the earliest opening of the route,[2] that it must from the very beginning have passed through the area marked by the ruins of the Lou-lan Site. But it is impossible to state whether any of the remains actually surveyed there date back to Former Han times.

Proposed military colony at Lou-lan.

The accounts of Shan-shan which are furnished by the Later Han Annals, and which have been fully analysed in Chapter IX,[3] are also lacking in exact details bearing on the Lou-lan Site and the ancient route which led past it. But in a proposal which the biography of Pan Yung, Pan Ch'ao's son, relates as having been made in the imperial council by this distinguished Chinese general about A.D. 119, and which we have already had occasion to discuss, we find the establishment of a Chinese military colony at Lou-lan foreshadowed in a way which clearly points to a position corresponding to, if not identical with, the ruined station of L.A.[4] The *Chang-shih* of the Western Countries, who was to be sent to Lou-lan at the head of five hundred men to organize the colony, will, we are told, 'dominate on the West the roads which lead to Yen-ch'i (Kara-shahr) and Ch'iu-tzŭ (Kuchā). On the south he will fortify the courage of Shan-shan and Yü-t'ien (Khotan). On the

[1] See above, pp. 344 sq.

[2] Cf. *Third Journey of Exploration*, *G.J.*, 1916, xlviii. p. 124.

[3] See above, pp. 329 sqq.

[4] See M. Chavannes' translation in *T'oung-pao*, 1906, p. 248; above, pp. 331 sq.

north he will overawe the Hsiung-nu (Huns). On the east he will be a neighbour to Tun-huang.' The purpose of the proposed military colony was, it is clear, to safeguard the direct route from Tun-huang to Kara-shahr leading north of the Lop marshes, to protect it from the raids of the Huns who were then holding Turfān in the north, and at the same time to exercise the necessary control over the ruler of Shan-shan or the Lop region. A glance at the map will suffice to show how accurately the position indicated by the passage coincides with that occupied by the Lou-lan Site.

Reappearance of local name *Lou-lan.*

Two points mentioned in connexion with the proposed colony deserve special notice here. On the one hand, we see that the locality intended for the colony lay in the north of Shan-shan but within its territory, as a subsequent passage specially refers to the protection and encouragement which the king of Shan-shan would derive from the presence of a Chinese garrison.[5] On the other hand, it is interesting and significant to find the name *Lou-lan* reappearing in Chinese records as the designation of a locality nearly two centuries after it had been replaced by *Shan-shan* as the appellation of the Lop territory. The documents found at the Lou-lan Site, and particularly those in Kharoṣṭhī, supply a full explanation. *Lou-lan : Kroraina* was the original indigenous name of the easternmost inhabited tract in the ancient Kuruk-daryā delta, where Pan Yung's military colony was to be established, and had continued in local use long after the Chinese had replaced it by *Shan-shan* as a designation of the whole Lop territory. Considering that Lou-lan : Kroraina was that extreme eastern portion of the inhabited Lop territory which 'approached nearest to China',[6] and consequently had a primary importance for the great route westwards, it is easy to understand why in the earliest Chinese usage the name was applied to the whole of the territory.

Pan Yung at *Lou-lan.*

Pan Yung's proposal was not carried out at once. But when, four years later, he was appointed *Chang-shih* of the Western Countries, it was at Lou-lan that he received, in A.D. 124, the submission of the king of Shan-shan and subsequently also of the kings of Kuchā and other western territories.[7] It was from the convenient base which Lou-lan furnished that he subsequently conquered Turfān and established a military colony at Lukchun. We are not told whether such a colony was also placed at Lou-lan. But considering its important position on the shortest and safest line of communication, it is difficult to believe that the Chinese hold upon Lou-lan could have been relaxed as long as the Later Hans maintained some political influence in the Tārīm Basin.

The 'Epoch of the Three Kingdoms' (A.D. 221–65), which followed the downfall of the Later Han dynasty, brings us to the period from which our extant documents and other remains of the Lou-lan Site date. The references to Lou-lan to be found in the historical records of the epoch intervening between Han and Chin times may, therefore, claim special interest. They are contained in an extant portion, dealing with the 'Western Countries', of the *Wei lio*, a work which was composed by Yü Huan between A.D. 239–65, and which treats of events belonging to the first two reigns of the Wei dynasty (A.D. 220–39).[8] We have already had repeated occasion to utilize the valuable topographical data furnished by this text, which M. Chavannes' critical annotated translation has rendered conveniently accessible.

The *Wei lio's* notice.

The *Wei lio's* notice presents this special interest for our inquiry, that it endeavours to give definite topographical indications as to the three routes which were then distinguished as leading from Tun-huang to the 'Western Countries'. As we shall have further on repeatedly to refer to this important passage, it will be convenient to reproduce the whole of it from M. Chavannes' rendering,[9] though I must confine my comments here to those points which have a direct bearing

[5] See *T'oung-pao*, 1906, p. 249; above, p. 332.

[6] See Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.*, x. p. 26.

[7] See *T'oung-pao*, 1906, p. 252.

[8] See Chavannes, *Les pays d'occident d'après le Wei lio*, *T'oung-pao*, 1905, pp. 519 sqq.

[9] See Chavannes, *ibid.*, *T'oung-pao*, 1905, pp. 528 sqq.

on the ancient route through Lou-lan. 'As regards the roads which starting from Tun-huang and Yü-mên kuan ('Jade Gate barrier') pass into the Western Countries, there were two before, but now there are three. The southern route is the one which starting from Yü-mên kuan leaves from the west, passes the Jo Ch'iang, turns westwards, crosses the Ts'ung-ling, traverses "the suspended passages", and passes among the Ta Yüeh-chih.

'Southern route.'

'The central route is the one which, starting from Yü-mên kuan, sets out on the west, leaves the well of the Protector-General 都護井,[9a] turns back at the northern extremity of the San-lung [desert of] sand 三隴沙, passes the Chü-lu granary 居盧倉; then on leaving from the Sha-hsi well 沙西井, turns to the north-west, passes through the Lung-tui 龍堆, arrives at the ancient Lou-lan 故樓蘭 and turning westwards arrives at Ch'iu-tzŭ 龜茲 (Kuchā), then attains the Ts'ung-ling 忽嶺.

'Central route.'

'The new route [of the north] is the one which, starting from Yü-mên kuan, sets out on the north-west, passes through Hêng-k'êng 橫坑, avoids the San-lung [desert of] sand as well as the Lung-tui, leads north of Wu-ch'uan 五船 and arrives, in the territory of Chü-shih 車師, at Kao-ch'ang 高昌 (Kara-khōja) . . . . . ; then it turns westwards and rejoins the central route at Ch'iu-tzŭ (Kuchā).'

'New northern route.'

Position of 'Jade Gate'.

My observations here as regards the southern and northern of the *Wei lio's* routes may be brief, as also those concerning the Yü-mên kuan, the 'Jade Gate barrier', from which they, as well as the central route, are described as starting. My subsequent explorations have proved that this famous frontier station, so frequently mentioned in the Chinese Annals in connexion with events affecting the Western Countries, was situated during Han times at a point of the ancient Chinese Limes in the desert west of Tun-huang marked by the ruined watch-station T. XIV and identified by the evidence of the records I discovered there.[10] That 'the southern route' of the *Wei lio* is identical with the one which still leads from Tun-huang along the northernmost main range of the K'un-lun, here known as Āltin-tāgh, to Charkhlik and thence through the string of oases in the south of the Tārīm Basin is made certain by the mention of the *Jo Ch'iang*, a nomadic tribe whose position in the mountains between Tun-huang and Chü-mo or Charchan is quite correctly described by the Former Han Annals.[11] We have already seen that the list which a subsequent passage of the *Wei lio* gives of the territories passed through by 'the southern route' begins with Shan-shan and the small 'kingdoms' of Chü-mo, Hsiao-yüan, Ching-chüeh (Niya), and Lou-lan, described as its dependencies.[12] It is not necessary for us to examine this list again, mainly based as it is on that which the Former Han Annals give for their 'Southern Road', nor to trace the distant

Line of 'southern route' traced.

[9a] For 'Puits du Protecteur' read 'Puits du Protecteur général', a correction pointed out to me verbally by M. Chavannes; cf. Chavannes, *T'oung-pao*, 1907, pp. 153, 154, note 1.

[10] See below, chap. XIX. sec. i, ii.

[11] See M. Chavannes' translation of this passage, with full notes on other references to the Jo Ch'iang, in *T'oung-pao*, 1905, p. 526, note 8; cf. also for the context of the *Ch'ien Han shu* passage, Wylie, *J. Anthrop. Inst.*, x. p. 23.

It deserves to be noted here that the *Ch'ien Han shu* is more accurate in describing the exact starting-point of 'the southern route' when it states: 'On leaving the *Yang* barrier the first people met with on advancing are the Jo Chiang.' We shall see below (chap. XVI. sec. iv) that the 'Yang barrier' was situated at the present Nan-hu, south-west of Tun-huang, and was connected with Yü-mên kuan by a southern flanking line of the Limes (chap. XIX. sec. iii).

[12] See above, p. 328. The obvious inversion of the order of these petty states in the *Wei lio's* list has been clearly pointed out, together with some minor inaccuracies and discrepancies, by Chavannes in *T'oung-pao*, 1905, pp. 535–6, note 3.

It is difficult to decide whether the separate mention of *Lou-lan* among the tracts dependent on Shan-shan is due merely to a kind of diplography, the earlier name Lou-lan for Shan-shan, as recorded by the *Ch'ien Han shu*, being meant, or whether we ought to recognize in it a reference to the northern portion of Shan-shan territory which had retained the old designation of Lou-lan, as attested by the documents of the Lou-lan Site, and which may, perhaps, also have enjoyed a kind of local autonomy.

extension of the *Wei lio's* route to the Pāmīrs (*Ts'ung-ling*) and the Great Yüeh-chih territories south of the Hindukush.

Line of 'new [northern] route'.

The 'new route' of the north need not detain our attention long; for it leads far away from the ground with which we are at present concerned, and we shall have to consider it in detail further on in Chap. XIX, where I hope to demonstrate the approximate line it is likely to have followed from the ancient Jade Gate to Turfān.[13] M. Chavannes has shown that it is identical with the route which in a passage of the Former Han Annals is described as having been newly opened in A.D. 2 from the territory of Posterior Chü-shih, corresponding to the present Guchen (Ku-ch'êng-tzŭ) region, towards Yü-mên kuan.[14]

Localities named on 'central route'.

The special interest to us of the *Wei lio's* notice of 'the central route' lies in the fact that it makes a definite reference to the Lou-lan Site, almost contemporary with the documents found there, by its mention of 'the ancient Lou-lan', and that it details some of the chief stages on the desert journey by which the site was reached by travellers from the 'Jade Gate' and the westernmost extension of the 'Great Wall'. The position of the last of these stages, the *Lung-tui* or 'Dragon Mounds', which the Former Han Annals refer to as the 'White Dragon Mounds',[15] was first determined by me, in the course of my explorations of 1914, when I traced the line of the old Chinese route where it crossed the salt-encrusted ancient Lop Sea, some forty miles to the north-west of the station L.A.[16] The location which I propose for the preceding stages which the *Wei lio's* account of the route mentions, the 'Well of the Protector-General', the 'Sands of the Three Ridges' (*San-lung-sha*), the *Chü-lu* granary, and the well of *Sha-hsi*, will best be discussed below in connexion with the journey which brought me in February–March, 1906, to the westernmost end of the Tun-huang Limes.[17]

'Ancient Lou-lan' of *Wei lio*.

After what has been shown above by the evidence of the remains and the documents, both Chinese and Kharoṣṭhī, it does not require detailed argument to prove that by the 'ancient Lou-lan' of the *Wei lio* is meant the Lou-lan Site. As it was still inhabited at the time when the *Wei lio* was composed, we may assume that the term 'ancient' was applied to the name in order to distinguish the locality from the southern portion of the Lop territory once also known as Lou-lan and possibly meant by the name as we found it cited above in the *Wei lio's* list of territories on the southern route.[18] It only remains to add that travellers proceeding westwards from 'ancient Lou-lan' along the bed of the Kuruk-daryā would find themselves on a direct route to Kuchā, as mentioned in the *Wei lio's* description, whether they chose to move via Korla or to follow the course of the Tārīm upwards.

Lou-lan mentioned by Li Tao-yüan.

There is only one Chinese text accessible to me of a date later than the *Wei lio* in which an independent reference to the Chinese station established at the Lou-lan Site can at present be traced. It is the commentary on the *Shui ching* composed by Li Tao-yüan some time before his death in A.D. 527, but embodying information of earlier origin, from which extracts of considerable interest for the ancient geography of the Lop territory have already been discussed above on the basis of M. Chavannes' translation.[19] In the passages of the commentary previously analysed we traced the course of the 'River of the South', i.e. the Tārīm branch supposed to come from Khotan, and of the Charchan River united with it, down to its embouchure into the 'Lake of Lao-lan'. Then the commentary, in a long passage left untranslated by M. Chavannes,

[13] For a detailed examination of the 'new route' of the north, cf. below, chap. XIX. sec. vi.

[14] See Chavannes in *T'oung-pao*, 1905, p. 533, note 1; also Wylie, *J. Anthrop. Inst.*, xi. p. 109.

[15] For this mention of the *Po-lung-tui*, see above, pp. 340 sq.

[16] See above, pp. 341 sq.; *Third Journey, G.J.*, xlviii. p. 128.

[17] See below, chap. XIV. sec. ii; also chap. XVII. sec. i.

[18] Cf. above, p. 328.

[19] See above, pp. 324 sqq.; Chavannes, *T'oung-pao*, 1905, pp. 566 sqq.

treats of 'the River of the North', i.e. of the rivers of Kāshgar and Yārkand, and proceeds to tell us :—[20]

'The waters of the *Ho*, i.e. "River [of the North"], move further east and pass to the south of the kingdom of *Mo-shan* 墨山. [This kingdom] has for its capital the town of Mo-shan; on the west, it is 240 li from *Wei-li* 尉犁. The waters of the *Ho* move further east and pass to the south of the town of *Chu-pin* 注賓; further east they pass south of the town of *Lou-lan* 樓蘭 and then run off eastwards. This is, no doubt, the place where the colony of soldiers sent to clear the fields [for cultivation] was established, and this is why the town inherited the name of the kingdom. The waters of the *Ho* proceed further east, to empty themselves in the *Yu* marshes 泑澤, which are those called by the [*Shui*] *ching* the *P'u-ch'ang* lake 蒲昌海. The water accumulates in the north-east of Shan-shan and in the south-west of the Town of the Dragon 龍城'.

Location of *Mo-shan*, *Wei-li*.

I think that the topographical indications here furnished can be fully explained if we keep in view the facts which recent surveys and explorations have established. The kingdom of *Mo-shan*, as M. Chavannes has pointed out, is rightly identified by an early commentator with the kingdom of *Shan* 山, which the Former Han Annals name as adjoining Shan-shan, and which, as we have already seen, can safely be located in the western Kuruk-tāgh.[21] His location is fully supported by the bearing and distance recorded for Wei-li, which, as a reference to the *Ch'ien Han shu's* notice of this territory discussed below shows, is identical with the tract on the Konche-daryā south-west of Korla.[22] A glance at the map makes it clear that the interlacing beds of the Tārīm and the Konche-daryā, which the text manifestly does not distinguish, lie south of the westernmost Kuruk-tāgh.

'Town of *Chu-pin*.'

When next we are told that the waters of the 'Ho', on their further course eastward, 'pass to the south of the town of *Chu-pin*', it is difficult not to think of the ruined station of Ying-p'an, situated near the northern bank of the large dry river-bed which branches off eastwards from the present Konche-daryā and marks the beginning of the Kuruk-daryā. My explorations of 1915 at this site have proved that the remains of Buddhist shrines found at Ying-p'an, and probably also those of an ancient circumvallation, go back to the early centuries of our era and belonged to a fortified Chinese station which was occupied down to about the same period as the Lou-lan site.[23] The line of massive watch-towers which stretches away from Ying-p'an north-westwards in the direction of Korla, and which on archaeological evidence must be assigned to early Han times, makes it quite certain that the ancient Chinese high-road, coming from the Lou-lan Site, passed here. The station was, no doubt, meant to guard an important point of the route where it was joined by the road leading up from Charchan and Charkhlik,[24] and I consider its identity with the 'town of Chu-pin' highly probable.

Li Tao-yüan's 'town of Lou-lan'.

Close to the south of Ying-p'an there passes the ancient well-defined river-bed of the Kuruk-daryā, running eastwards, and down this we are clearly taken when Li Tao-yüan tells us that 'further east [the waters of the Ho] pass south of the town of *Lou-lan* and then run off eastwards'. The account given in the preceding chapter shows that, coming from the south, we crossed a succession of ancient river-beds, all deltaic branches of the Kuruk-daryā, before reaching the Lou-lan Site, while north of it only a few dry beds, and none of any great width, were met with on

[20] Cf. *T'oung-pao*, 1905, p. 570.

[21] See Chavannes, *T'oung-pao*, 1905, p. 552, note 7; above, p. 334.

[22] See below, chap. xxx. sec. i; Wylie, *Notes on the Western Regions*, *J. Anthrop. Inst.*, xi. p. 101; also Chavannes, *T'oung-pao*, 1905, p. 552.

[23] For a preliminary note, see my *Third Journey of Exploration*, *G.J.*, xlviii. p. 208. The ruins had first been noticed by Colonel Kozloff and Dr. Hedin; cf. the latter's *Central Asia*, ii. pp. 30 sqq.

[24] That this road led to the east of the present main bed of the Tārīm is suggested by the position of the small ruined post of Merdek-tim, which also dates back to Han times; see below, pp. 452 sqq.

our surveys of 1914. So the correctness of the information given by Li Tao-yüan is here, too, borne out by topographical evidence.

Agricultural colony at *Lou-lan*.

What the passage following in Li Tao-yüan's text has to tell us of 'the town of Lou-lan' is of particular interest for us. 'This is, no doubt, the place where the colony of soldiers sent to clear the fields [for cultivation] was established, and this is why the town inherited the name of the kingdom.' In order to understand the reference made here we must turn to an anecdote related by Li Tao-yüan in an earlier portion of his commentary where he deals with the course of the River of the South on its passage north of Shan-shan.[25] The source from which the anecdote has been derived cannot be traced, and Ch'üan Tsu-wang, a Chinese editor of the *Shui ching*, whom M. Chavannes quotes, has pointed out valid critical reasons for doubting the authenticity of the anecdote.[26] But whatever its origin and its value from an historical point of view may be, there can be no doubt about the fact that it must have originated, probably locally, at a time preceding the abandonment of the Lou-lan Site, and that it has preserved for us evidence as to the name of the Chinese colony situated there and at least a popular tradition as to the time of its foundation.

Anecdote about So Man's colony.

The following is an abstract of Li Tao-yüan's story as rendered by M. Chavannes:—'So Man 索勱, whose appellation was Yen-i 彥義 and who was a native of Tun-huang, was a capable man. At the request of the prefect Mao I 毛奕 he was charged with the functions of an 'Êrh-shih general'. At the head of a thousand soldiers of Chiu-ch'üan and Tun-huang he came to Lou-lan in order to establish an agricultural colony there. He raised a white house. He summoned soldiers of Shan-shan, Yen-ch'i (Kara-shahr), and Ch'iu-tzŭ (Kuchā), at the rate of a thousand for each of the three kingdoms, in order to construct a transverse barrage in the Chu-pin River. On the day when the river was dammed up the water threw itself against the obstacle, bounding with violence, and the waves covered the dyke.' So Man is then said to have summoned with a grave voice the divinities of the river to submit to his authority as in old times those of the Huang Ho and the Hu-t'o River of China are believed to have submitted to certain dignitaries. '[So] Man in person performed prayers and sacrifices; but the water did not diminish. Thereupon he drew up [his soldiers] in battle array and put them under arms. They beat the drums, raised great shouts, at times making blows with their swords, at others shooting arrows, and thus for three days fought a great battle [against the river]. Then the water receded and fell; it supplied irrigation and produced fertility. The Hu (barbarians) proclaimed this a miracle. [So Man] made great arable lands, and at the end of three years gathered a million measures of corn; his fame impressed the foreign countries.'

So Man's barrage across river.

It appears to me not very difficult to separate certain obvious facts embodied in this story from the embellishments which popular imagination has woven around them. It is clear that tradition knew of the foundation of a Chinese military colony in a locality which unmistakably corresponds to that of our Lou-lan Site, and of its creation having depended on the success of an engineering scheme intended to secure adequate irrigation for the Lou-lan tract by a barrage thrown across a great river. Whether by this river, which the story as related by Li Tao-yüan calls *Chu-pin*, was meant the river once filling the dried-up Kuruk-daryā bed or a main branch of the Tārīm, water from which may have been needed to supplement the supply furnished to the Kuruk-daryā by the Konche-daryā or Kara-shahr River, is a question we need not attempt to examine here. Considering the great changes to which hydrographic conditions are necessarily subject in a terminal basin where differences of level are so slight as in the Lop depression, and considering also the scantiness of historical records and archaeological data, no convincing solution of such a question can, in my opinion, be hoped for.

[25] See Chavannes, *T'oung-pao*, 1905, pp. 567 sq.; also above, pp. 325 sq., where the preceding text has been analysed.

[26] Cf. *T'oung-pao*, 1905, p. 568, note 1.

River dammed for irrigation.

But what can be asserted without question is that the tradition recorded by Li Tao-yüan about the construction of that barrage accurately describes the method still in use throughout the Tārīm Basin for securing irrigation to tracts dependent on rivers passing through flat alluvial plains. It is by means of just such a dam, thrown right across the Yārkand River two marches above Marāl-bāshi and requiring annual reconstruction after the summer floods by a considerable force of labourers, that the great oasis is assured of the main portion of the water necessary for irrigation.[27] On ground close to the head of the ancient river-bed once carrying water to Lou-lan we find just the same conditions illustrated nowadays by the newly formed agricultural settlement of Tikkenlik, the existence of which is wholly dependent on the barrage or *tugh* annually constructed across whichever may be the main channel of the Tārīm.[28]

Difficulties of dam construction.

In view of the limited time available between the melting of the winter ice and the advent of the spring flood, and also owing to the primitive building materials employed, mere earth and brushwood, the construction of such dams is a serious engineering task and calls for the simultaneous employment of an amount of labour which is often beyond local resources, especially while the colony is still young. Hence it would be easy to illustrate the demand for labour which So Man is related to have made upon the neighbouring territories of Shan-shan, Yen-ch'i, and Kuchā by parallels taken from modern irrigation works which have been effected in the Tārīm Basin since the present Chinese administration was established after the downfall of Yākūb Bēg's régime.[29] Nor can any one familiar with the 'mass psychology' of modern Turkestān feel surprise at the popular imagination of the time having attributed the success of So Man's engineering feat to the miracle which Li Tao-yüan's story describes. M. Chavannes has already called attention to the curious resemblance it bears to the fight between Achilles and the River Xanthus related in the Iliad.[30]

Date of agricultural colony.

Li Tao-yüan's text does not give a date for the foundation of the agricultural colony at Lou-lan. But there are indications, I think, which show that he or his source placed the event in the period of the Later Hans. In the first place, it should be noticed that the commentator Ch'üan Tsu-wang, already referred to above, mentions as one of his critical reasons against the authenticity of the story that the title of 'Êrh-shih general' did not exist under the Second Han Dynasty.[31] Evidently he must have had some ground for assuming that this chronological placing of the story was intended or implied. In the second place, I may point out, with all the reserve due from a non-Sinologist, that the name of So Man and the main fact related of him bear a curious similarity to what a passage of the biography of Pan Yung, contained in the Later Han Annals, tells us of a precursor of this famous Chinese general.[32] In M. Chavannes' translation of this biography we read that in the year corresponding to A.D. 119 the governor of Tun-huang,

[27] Cf. regarding this dam the graphic and detailed account given by Dr. Hedin, *Reisen in Zentral-Asien*, pp. 225 sq. The tumultuous scenes annually enacted at the final closing of this dam, and the stories of intentional human sacrifice connected with it, curiously recall the legendary setting of the account of So Man's barrage.

[28] Cf. Huntington, *Pulse of Asia*, p. 265 sqq. Prof. Huntington rightly points to Tikkenlik as 'essentially the modern representative of Lou-lan', but takes too gloomy a view as to its immediate future. The information collected by me in 1915 showed that Tikkenlik still continues to flourish notwithstanding the difficulties which the frequent changes in the main terminal course of the Tārīm create, and which are far more serious than the alleged salinity of the water. In 1914 I heard the Lopliks at Abdal complaining of the construction of a new big dam above Tikkenlik as the cause which had kept the summer flood of the Tārīm from reaching their marshes.

[29] Thus I was told at Maral-bāshi that the first construction of the barrage above referred to could be effected only with the help of great contingents of forced labour brought by the Chinese from the oases of Kāshgar and Yārkand. See for a similar instance in the Khotan region, above, pp. 203 sqq.

[30] Cf. *T'oung-pao*, 1905, p. 568, note 5.

[31] See *ibid.*, note 1.

[32] Cf. Chavannes, *Trois généraux chinois*, *T'oung-pao*, 1906, p. 246.

Ts'ao Tsung, sent the *Chang-shih* So Pan 索班 at the head of a thousand men to establish a military colony at I-wu or Hāmi. The kings of Anterior Chü-shih (Turfān) and of Shan-shan made their submission to So Pan, who, however, some months later perished in an attack of the Huns and the tribe of Posterior Chü-shih (Guchen region). The first part of the names So Pan and So Man is identical, so also is the story of their dispatch from Tun-huang with a thousand men to establish a military colony. The locality indicated differs, it is true, but in each case it is the first cultivable tract beyond Tun-huang reached by the northern and central routes respectively. Is it possible that the name of an historical personage was foisted into a local anecdote about the military colony established at Lou-lan at approximately the same period, the founder of which was no longer remembered by name? It must be left to others to clear up the question.

Story relating to Lou-lan Site.

In any case our examination of Li Tao-yüan's passage about the 'town of Lou-lan' and of his story of its foundation has made it quite clear that the source from which he drew his information knew of the existence of a Chinese military colony, occupying the same position in which we find the ruins of the Lou-lan Site and bearing the very name attested for this by the documents found there. The period from which this information approximately dates cannot be far removed from the time of the occupation of the Lou-lan Site as proved by our archaeological evidence.

Li Tao-yüan's '*Yu* marshes'.

It only remains for us to consider briefly what the concluding portion of Li Tao-yüan's above-quoted passage states about the final course of the *Ho*, i.e. the Kuruk-daryā. Its waters after passing the town of Lou-lan are said there 'to empty themselves in the *Yu* marshes, which are those called by the [*Shui*] *ching* the *P'u-ch'ang* lake. The water accumulates in the north-east of Shan-shan and in the south-west of the Town of the Dragon.' My explorations of 1914 and 1915 have definitely proved that the ancient river-beds skirting the Lou-lan Site found their termination further east in dried-up marshes by the western shores of that great salt-encrusted lake-bed which in the *Shui ching* and also in the Former Han Annals bears the alternative names *P'u-ch'ang* lake or 'Marsh of Salt'.[33]

Li Tao-yüan's 'Town of the Dragon'.

It must be reserved for my detailed report on these explorations to show how closely the observations then made bear out the account which our earliest Chinese records give of the extent and character of the ancient 'Salt Marsh'. Here I shall confine myself to the mention of those topographical facts which help to explain the data contained in Li Tao-yüan's description of the P'u-ch'ang lake. Their interest reveals itself at once when we consider the statement made at the end of the passage just quoted, about the water accumulating 'in the north-east of Shan-shan and in the south-west of the Town of the Dragon'. The surveys effected in 1914 to the north-east of the Lou-lan Site, and briefly summarized in my paper *A Third Journey of Exploration in Central Asia*, leave no doubt that by the legendary 'Town of the Dragon' is meant the great belt of high, wind-eroded clay ridges, or Mesas, which I found extending from the vicinity of the ancient Han *castrum* (*L.E.*) north-eastwards for a distance of close on thirty miles.[34] These Mesas, rising with precipitous walls to heights of a hundred feet and more, are quite distinct in appearance from the usual Yārdang ridges, and go back in their origin to an earlier geological age, though the agency which created them, wind-erosion, is the same. By their bold shapes and fantastic outlines they constantly suggest visions of castles, bastioned town walls, Stūpas, and the like.[35]

[33] Cf. Wylie, *Notes on Western Regions*, *J. Anthrop. Inst.*, x. p. 21.

[34] See *G.J.*, xlviii. pp. 127 sq., with Fig. 14, which shows one of these Mesas (*L.F.*). For the ancient *castrum* found near the south-west end of the Mesa belt, cf. *ibid.*, p. 124. On the rough provisional sketch-map attached to this paper the position of this belt may be approximately indicated as lying along and south of the letters DE in the entry LOP DESERT. A detailed delineation of this ground will be found in Map No. 32 of the 1 : 500,000 Atlas of our Central-Asian surveys now in preparation.

[35] Mesas of the same type, but in a far thinner string and lower, are met with between the wells of Achchik-kuduk and Kum-kuduk on the caravan track skirting the southern

'Dragon Town' represented in Mesa area.

The identification of this Mesa area with the 'Town of the Dragon' is proved both by the situation which the already-quoted passage indicates for it, relative to Shan-shan and the marshes receiving the 'waters of the Ho', and by the description of the 'Town of the Dragon' given in the text immediately following. In regard to the first I may point out that if 'the water accumulates in the north-east of Shan-shan and in the south-west of the Town of the Dragon', the latter must necessarily be situated to the north-east of Shan-shan, i.e. the Charkhlik-Mīrān tract. Now a glance at even the rough, small-scale sketch-map accompanying my above-quoted paper and illustrating my explorations of 1913–15 is enough to show that this is exactly the bearing from the Charkhlik-Mīrān tract to the Mesa belt stretching north-east of Lou-lan. It is along the shore of the ancient salt-encrusted lake-bed, stretching thence south-westwards to the vicinity of the Chainut-köl lagoons, that the terminations of the various old river-beds representing branches of the Kuruk-daryā could be traced by us, and on this ground must be placed the terminal marshes referred to by Li Tao-yüan.

Description of 'Dragon Town'.

The description given of the 'Town of the Dragon' in the immediately succeeding passage is equally convincing. 'The Town of the Dragon is the site of the town in which at one time resided Chiang Lai 羌賴. This was a great kingdom of the Hu. An overflow of the P'u-ch'ang lake covered up the capital of this kingdom. The foundations [of this town] are still preserved; they are very extensive. If at sunrise one starts from the western gate one arrives at sunset at the eastern gate. At the scarped foot of this town a canal had been made. On the line which has survived of it, the wind blowing has gradually produced the form of a dragon, which with its face turned westwards regards the lake. It is from this that the name of the Town of the Dragon is derived.' [36]

Origin of name 'Dragon Town'.

We see here quite plainly that the name 'Town of the Dragon' was borne not by the remains of a real town, but by a striking natural formation, that great array of high Mesas already referred to, which in ancient times must have presented themselves to the imagination of wayfarers—just as they did to ours when we passed here in February, 1914, the first travellers for many centuries through this desolate wilderness of clay and salt—like the walls and mansions of some huge ruined city. The very extent of it given in the description, a long day's journey from one city gate to the other, which otherwise might seem like a fanciful exaggeration, fully confirms our identification. For it took us a long day's march on February 27, 1914, to pass through that portion of the Mesa belt which the ancient Chinese route, as then correctly traced by me, traverses.[37] I am unable to decide to which particular clay ridge, if any, the explanation given of the origin of the name 'Dragon Town' referred. But it is curious to note in it what looks like a correct comprehension of the conspicuous part played by wind-erosion on this ground.

Great salt waste described.

What follows in Li Tao-yüan's notice about the physical characteristics of the region adjoining the 'Town of the Dragon' confirms our belief in the accurate local knowledge possessed by the authority from which he borrowed his statements of Lou-lan topography. 'This region has an extent of a thousand li; it is entirely formed of salt, but of salt in a hard and solid state. The travellers who pass through it spread pieces of felt for all their domestic animals in order to make them sleep on these. If one digs beneath the soil, one finds blocks of salt, big as large cushions, which are piled up one above the other in regular fashion. [In this country there are] as it were mists which rise and clouds which float, and rarely does one make out the stars and the sun. Little is found there of living animals and plenty of demons and strange beings.'

shore of the great dried-up salt sea; see *Desert Cathay*, i. pp. 522 sqq. The identification with the 'Town of the Dragon', there proposed, has been proved by the explorations of my third journey to be erroneous. For another and larger area covered with such high clay terraces, marking an ancient lake-bed of the Su-lo Ho, further east, see *ibid.*, pp. 533 sqq.

[36] See Chavannes, *T'oung-pao*, 1905, p. 571.

[37] Cf. *Third Journey of Exploration*, *G.J.* xlviii, p. 127.

Route through salt-encrusted old sea-bed.

If we except the statement about the extent of the region, which it is impossible to check as the direction and limits of measurement are not definitely indicated,[38] and make due allowance for Chinese faith in the existence of 'demons and strange beings', still as robust now as ever, every point of this description is fully supported by the observations I made on that trying journey of ten days by which in 1914 I traced the line of the ancient Chinese route to Lou-lan where it passed through, or skirted, the great salt-encrusted sea-bed.[39] We have there a perfectly correct description of the hard crumpled-up crust of salt covering the whole bottom of the ancient dried-up Lop Sea across and along which the Chinese route to Lou-lan led. The big cakes and hummocks of hard salt which compose the surface of this vast, dismal expanse, and show below it in the innumerable cracks and fissures, are just as the old Chinese account graphically describes them.[40] Without the precaution of spreading felts, which wayfarers of old, benighted on such ground, were evidently accustomed to resort to, not even hardy camels, and still less any other domestic animals, could find a minimum of rest and comfort during halts. The constant winds blowing across these great wastes, especially from the east-north-east, and carrying with them fine dust, the product of ceaseless erosion, must make the hazy skies we experienced there in February and March a regular feature almost all the year round. Later in the spring and during the summer Burāns with their thick clouds of dust must be frequent. The total absence of animal life on and around the salt-encrusted dry sea-bed was striking and impressive even for us who came from the dead land of Lou-lan.

Region of Dragon Town located.

Li Tao-yüan's notice concludes with the following instructive remarks: '[The region in which is found the Town of the Dragon] touches, on the west, Shan-shan 鄯善 and connects, on the east, with the Three Sand Deserts 三沙. It constitutes the northern limit of the lake. This is why the *P'u-ch'ang* [lake] also bears the name of the Marsh of Salt 鹽澤.' I have already pointed out in a note that the 'Three Sand Deserts' obviously correspond to the desert of the 'Three Ridges Sands' 三隴沙 which the *Wei lio* mentions as being passed, at their northern extremity, by the central route.[41] The place meant is the belt of high dunes crossed by the caravan track from Tun-huang, a short distance north-east of Bēsh-toghrak. From this point to the west as far as Lou-lan there extends a well-defined region, that portion of the great Lop depression which contains only wastes of dried-up salt lake and bare clay, fringed by the Kuruk-tāgh glacis. This region is correctly described in Li Tao-yüan's notice as forming the northern border of the P'u-ch'ang lake, i.e. that portion of the old Lop-nōr marshes which, at the period from which his information dates, still held water, at least in places. That this portion has undergone considerable shrinkage within historical times through the progress of desiccation is a belief which I share with Professor Huntington. But the question is not one which calls for examination here.

[38] If we may assume that the extent of a thousand li was intended to represent the distance from the easternmost edge of the habitable Lou-lan area to the spot where the ancient route passed the northernmost point of the 'Three Sand Deserts' (I take these to be identical with the desert of the 'Three Ridges Sands' of the *Wei lio*; see above, pp. 418 sq., and below, chap. XIV. sec. ii), the measurement is remarkably accurate. From my Camp xcix near the last ruin traced on the Lou-lan side (*L.J.*) to Camp cxii in the sandy belt north-east of Bēsh-toghrak, where I place the passage of the 'Three Ridges Sands', the aggregate of my marches along the line of the ancient Chinese route as measured by the cyclometer amounted to 230 miles. This corresponds closely to 1,000 li, taking the mile as equal to 5 li, which on level desert ground I have found an ordinarily correct estimate.

[39] Cf. my *Third Journey of Exploration, G.J.*, xlviii, pp. 127 sqq.

[40] For a graphic description of the salt-encrusted sea-bottom where Prof. Huntington crossed it further south, cf. *Pulse of Asia*, pp. 251 sq.; also the photograph reproduced in the frontispiece of that work.

[41] Cf. above, note 38 and p. 418; Chavannes, *T'oung-pao*, 1905, p. 529.

SECTION XI.—THE ABANDONMENT OF LOU-LAN

No later mention of Lou-lan colony.

I am unable to trace any Chinese record relating to the military colony established at Lou-lan of a date later than that to which Li Tao-yüan's notice may belong. We know that after the close of the Eastern Chin Dynasty (A.D. 317–420) and the division of the empire between North and South all attempts at asserting Chinese predominance in the Western Countries ceased for over two centuries. When, under the Sui dynasty (A.D. 589–618), interest in those distant regions revived, the imperial commissioner P'ei Chü, collecting information at what now is Kan-chou, wrote in A.D. 608 his 'Treatise with maps on the Western Countries'. But the account he gives of the three routes which were then open to these territories clearly shows that by that time the *Wei lio's* 'route of the Centre', passing north of the P'u-ch'ang lake and through Lou-lan, was no longer known.[1]

Lou-lan station abandoned in 4th century.

This negative evidence of the records cannot tell us when the route actually became closed. But we may safely assume that this event was not far removed from the time when the Lou-lan Site was abandoned. And for the approximate determination of this we have fortunately definite archaeological evidence to guide us. That the abandonment of the Chinese station at Lou-lan took place some time during the fourth century A.D., and probably not long after its first third, is proved by the fact that among the numerous Chinese dated records found at the ruined station L.A. there are only three belonging to the fourth century, and of these none later than A.D. 330.[2] Against these we have not less than fifteen in my own collection dating from the years A.D. 263–70, with at least six more of the same years brought away by Dr. Hedin.[3] Equally convincing is the evidence of the coins. In the course of my explorations of 1906 and of 1914 I recovered an aggregate of over five hundred copper coins from the whole Lou-lan area.[4] Yet among this great array of coins there is not a single piece showing a type later than those issued during Han times and down to the Western Chin dynasty.

Cause of abandonment of route.

Whereas the time of abandonment of the Lou-lan site and of the once important route passing through it may thus be considered as approximately fixed, we are not in a position at present to make a safe assertion as to the direct cause of this abandonment. In view of the chronological coincidence it would be tempting at first sight to seek this cause solely in the cessation of Chinese political control westwards, which took place in the course of the fourth century A.D., and the considerable reduction of trade intercourse with the Western Countries which is likely to have accompanied it. But this assumption would not by itself suffice to explain why, on the reassertion of Chinese authority in the Tārīm Basin before the middle of the seventh century, no attempt was made to reopen the Lou-lan route. It was certainly the shortest line of communication between Tun-huang and the great oases along the southern foot of the T'ien-shan, and, as Li Tao-yüan's commentary shows, a clear recollection of it had survived in China until only about a century earlier.

Abandonment connected with, or followed by, physical change.

We are thus led to conclude that the abandonment of the Lou-lan route must have been connected with, or else followed in the interval by, that great physical change, disappearance of an

[1] Cf. Chavannes, *T'oung-pao*, 1905, p. 534, note 3; also Richthofen, *China*, i. pp. 529 sq. P'ei Chü's central route led through Turfān, Kara-shahr, Kuchā, and, no doubt, reached the first place, as the modern Chinese high road does, via Hāmi. His southern route followed the line Shan-shan, Yü-t'ien (Khotan), etc. The routes mentioned by P'ei Chü are the same which, as seen from the T'ang Annals, were in use after the reconquest of Eastern Turkestān as long as Chinese control lasted.

[2] Cf. above, p. 408. To the two documents of A.D. 312 and 330 there must be added a third, of A.D. 310, in Dr. Hedin's collection; see Herr Himly's paper in Hedin, *Central Asia and Tibet*, ii. p. 144.

[3] See Herr Himly's paper, *ibid.*

[4] For a synopsis of the coins found at Lou-lan in 1906, see below, Appendix *B*.

adequate supply of water, which has since turned the once habitable area between the extant Lop marshes and the Kuruk-tāgh into the lifeless wilderness of wind-eroded clay, salt, and sand now found there. We have seen above that the difficulty about water must already have been serious during the period when Lou-lan was still occupied by a Chinese station; for there is evidence of this difficulty both in a record from the site and in what Li Tao-yüan's story tells us about the foundation of So Man's military colony.[5]

Drying-up of Kuruk-daryā.

It is easy to realize even now what change the drying-up of the Kuruk-daryā and of the canals dependent upon it must have brought about in the Lou-lan region. But we have no adequate materials for determining what was the immediate cause of this drying-up, and in what way it proceeded. The progress of general or regional desiccation, i. e. a diminution of the water-supply from all sources reaching the Konche-daryā and Tārīm; a gradual diversion of the waters previously feeding the Kuruk-daryā into a southern branch of the Tārīm through some natural process affecting all deltas; failure of maintaining barrages, etc., which previously assured a sufficient head of water for the Kuruk-daryā, through the disappearance of an effective administration, internal troubles, etc.,—all these and others besides might be causes adequate in themselves to bring about that great change in the physical conditions of the Lou-lan region. Which of them were actually at work is a question which the total want of definite records does not allow the critical student to answer even in a tentative fashion.

Site visited later for grazing.

There is, however, one observation I made at the ruins which suggests that the change, whatever its direct cause was, did not come over the doomed settlement suddenly. The thick layers of consolidated sheep-dung which covered and protected the floors of the large and well-constructed dwelling L.B. IV[6] point to this building, once probably the residence of a local notable, having served for a fairly long number of years as a shed for flocks. Such base use of a structure which at the time seems still to have been in a state of substantial repair is best explicable on the assumption that the site, though no longer capable of cultivation or permanent occupation, retained enough vegetation, with a minimum supply of water, to be fit for use as a grazing ground. The fact of ruins both at the Niya Site and at Mīrān showing signs of similar use by herdsmen, after these settlements had become deserted, distinctly supports this inference.[7] But even this last lingering trace of life is likely to have vanished from the Lou-lan Site before T'ang times, if the negative evidence of coins and other antiquarian finds may be trusted.

Section XII.—LIST OF ANTIQUES FROM LOU-LAN SITE

MISCELLANEOUS OBJECTS FOUND AT LOU-LAN SITE, L.A.

L.A. 001. Pottery fr., hand-made, of ill-levigated light red clay, fired on an open hearth (?) and 'smothered' (?). Outer surface orig. covered with black, and had incised orn. of lines and circles. Much sand-worn. $2\frac{1}{4}'' \times 2'' \times \frac{3}{16}''$.

L.A. 002. Pottery fr., hand-made, of well-levigated grey clay, fired on an open hearth. Outer face corrugated as L.A. 00146; VI. ii. 0024; L.B. IV. ii–v. 006; prob. by contact with woven rush-work in which the pot was shaped. This mat-marking is found on early Chinese pottery, and was freely used on the pottery found in the dolmens of Japan. $1\frac{7}{8}'' \times 1\frac{9}{16}'' \times \frac{1}{4}''$.

L.A. 003. Pottery fr., of hard red clay covered inside and out with deep blue-green glaze. Possibly Chinese. $1\frac{11}{16}'' \times 1\frac{9}{16}'' \times \frac{1}{4}''$.

L.A. 004. Pottery fr., trimmed round and pierced for use as a spinning-whorl. Diam. $1\frac{3}{16}''$, thickness $\frac{1}{4}''$.

L.A. 005. ($\frac{1}{2}$ mile S. of L.A.) **Base of red stoneware vase**, wheel-made and kiln-fired; mud-coloured clay with red haematitic face; surface much crackled. Prob. Chinese. Diam. $2\frac{1}{8}''$.

L.A. 006. Pottery lamp, hand-made, of ill-levigated clay; hemispherical, with side pinched out to take wick. Cf. L.A. II. 001. Diam. $2\frac{5}{8}''$, h. $1\frac{1}{8}''$. Pl. XXXVI.

[5] See above, p. 411 and pp. 421 sq.

[6] See above, p. 400.

[7] Cf. above, p. 245; below, chap. XIII. sec. i.

L.A. 007. a–b. Two pottery frs. prob. from same vessel, of flaky yellow clay. Outside covered with thick deep blue-green glaze, largely flaked off. Body softer than Chinese-made ware; prob. local make showing Western influence. (*a*) $3'' \times 2\frac{1}{2}''$; (*b*) $4\frac{1}{8}'' \times 3\frac{3}{8}''$; thickness $\frac{3}{16}''$.

L.A. 008. Pottery fr., from hand-made jar with globular body and open mouth. Rim is nearly sq. in section and very closely overhangs body. Poorly levigated clay, very hard fired to sealing-wax colour; surface black. 'Smothered' ware. $2\frac{3}{4}'' \times 3'' \times \frac{3}{8}''$.

L.A. 009. Pottery fr. from neck of vase, hand-made, of poorly levigated clay, fired on an open hearth and 'smothered'. Incised V-shaped pattern on neck. $2\frac{1}{2}'' \times 2\frac{1}{2}'' \times \frac{3}{8}''$. Pl. XXXVI.

L.A. 0010. Pottery fr. from shoulder of vessel, hand-made, of poorly levigated black clay, hard and evenly fired. On shoulder, incised orn. of squares filled with diagonal hatching; below, line of tooth-pattern dividing this from plain surface. Handle has been broken off. $3'' \times 3'' \times \frac{3}{8}''$.

L.A. 0011. Pottery fr., hand-made, of ill-levigated black clay, hard and evenly fired. $1\frac{3}{4}'' \times 1\frac{3}{8}'' \times \frac{3}{8}''$.

L.A. 0012. Stucco fr. stamped with relief pattern, rosettes with the leaves bent as the arms of a turbine. Back flat; front accidentally burnt. Grey clay. $2'' \times 1\frac{1}{2}''$. Pl. XXXVI.

L.A. 0013. Bronze buckle with tongue on hinge. Cast bronze. Rounded with two oval lights. Found 17. xii. 06. $1\frac{7}{8}'' \times 1\frac{3}{4}''$. Pl. XXXVI.

L.A. 0014. Fr. of bronze dagger or sword-blade. Broken close by hilt and towards point. Central rib; remains of cross-piece by attachment. Found 17. xii. 06. Length $2\frac{1}{8}''$, width by hilt $1\frac{3}{4}''$, by point end $1\frac{1}{8}''$. Pl. XXXVI.

L.A. 0015. Bronze rivet head, smooth, circular, convex, with part of stem. Found 17. xii. 06. Diam. *c.* $\frac{1}{2}''$.

L.A. 0016. Limestone whetstone, broken, lenticular section, worn on one face, ground smooth all over. Found 17. xii. 06. Length $2\frac{1}{2}''$.

L.A. 0017. (W. of.) **Bronze arrow-head;** blade triangular in section, each face slightly leaf-shaped. Hexagonal shaft formed by cutting back sq. the angles of the blade. Traces of iron tang. Triangular hollow in one side. Cf. N. of C. 123. 001, and T. 007. Condition good. Found 17. xii. 06. Length $1\frac{1}{8}''$. Pl. XXIX.
For others similar see L.A. 0069, 0082, III. 001.

L.A. 0018. (W. of.) **Jasper flake,** brown; one plain face with bulb, the other with sharp transverse rib. Found 17. xii. 06. Length 1″.

L.A. 0019. (W. of.) **Jasper blade,** mottled brown; one face ribbed, both edges worked. Found 17. xii. 06. Length $1\frac{1}{2}''$.

L.A. 0020. (N. of.) **Circular bronze boss** with orn. of pointed quatrefoil attached to centre by iron bolt. Condition fair. Shield or harness boss. Found 17. xii. 06. Diam. $3\frac{3}{4}''$. Pl. XXXVI.

L.A. 0021. Bronze rod, condition fair. Found 18. xii. 06. $5\frac{1}{4}'' \times \frac{1}{4}'' \times \frac{3}{16}''$. Pl. XXXVI.

L.A. 0022. Iron bolt, pointed, rectang. in section. Found 18. xii. 06. $1\frac{9}{16}'' \times \frac{5}{16}''$ sq.

L.A. 0023. Part of bronze hook, broken both ends; rounded outside, slightly hollowed inside; condition good. Found 18. xii. 06. Length 5″; width at straight end $\frac{3}{8}''$, at curved end $\frac{1}{4}''$. Pl. XXXVI.

L.A. 0024. Bronze nail with flat round head; stem oblong in section; condition fair. Found 18. xii. 06. Length $\frac{7}{8}''$, diam. of head $\frac{3}{8}''$.

L.A. 0025. Bronze nail as L.A. 0024; broken, condition bad. Found 22. xii. 06. Length $\frac{3}{8}''$, diam. of head $\frac{3}{8}''$.

L.A. 0026. Bronze rivet-plate, oblong, pierced at each end; with rivet through one hole. Condition fair. Found 22. xii. 06. $1'' \times \frac{3}{8}''$.

L.A. 0027. Fr. of bronze mirror, curved edge. On back, broad plain border, row of triangular outward-pointing rays, then row of straight cross-bars, then plain band. Condition good. Found 22. xii. 06. Gr. M. $1\frac{5}{16}''$, thickness at edge $\frac{1}{8}''$, thickness inside $\frac{1}{32}''$. Pl. XXIX.

L.A. 0028. Fr. of bronze mirror; cf. L.A. 0027. Broad thickened rim, no orn., condition good. Found 22. xii. 06. Gr. M. $1\frac{3}{16}''$, thickness at edge $\frac{3}{32}''$, thickness inside $\frac{1}{32}''$.

L.A. 0029. Fr. of bronze mirror; cf. L.A. 0027. Broad thickened rim divided by groove from central plane, no orn., condition good. Found 22. xii. 06. Gr. M. $1\frac{1}{8}''$, thickness at edge $\frac{1}{8}''$, thickness inside $\frac{1}{32}''$. Pl. XXIX.

L.A. 0030. Fr. of bronze nail or rivet. Round hollow overhanging head; pin oblong in section, divides into two. Found 22. xii. 06. Length $\frac{7}{16}''$; diam. of head $\frac{1}{4}''$.

L.A. 0038. Bronze bar, oblong in section, condition bad. Found 22. xii. 06. $1'' \times \frac{1}{4}'' \times \frac{3}{16}''$.

L.A. 0039. Bronze spatula made of small rod beaten at one end into curved sq.-ended bowl; condition fair. Cf. L.A. 0048 and 00120. Found 22. xii. 06. Length $1\frac{1}{16}''$, diam. of rod $\frac{1}{16}''$, breadth of spatula $\frac{1}{4}''$.

L.A. 0040. Bronze bar, oblong in section, bent round into a V, with loop point; ends beaten flat; condition good. Found 22. xii. 06. Length of each arm $1\frac{1}{2}''$. Pl. XXIX.

L.A. 0041. Bronze bar, oblong in section; one end beaten into a hook; condition good. Found 22. xii. 06. $1\frac{1}{4}'' \times \frac{1}{8}'' \times \frac{1}{16}''$.

L.A. 0042. Iron rod, slightly thicker at one end than the other; condition bad. Tool, such as drill. Found 22. xii. 06. $1\frac{7}{8}'' \times \frac{1}{8}'' \times \frac{1}{16}''$.

L.A. 0043. Flat tapering bronze strip, broken at broad end. Inside, incised line close to edge and rows of punched dots slanting diagonally towards other edge. Other side plain; condition good. Found 22. xii. 06. $\frac{7}{8}'' \times \frac{3}{8}''$ to $\frac{7}{32}'' \times \frac{1}{32}''$.

L.A. 0044. Oblong bronze plate; cf. L.A. 0026. Not pierced; condition good. Found 22. xii. 06. $\frac{9}{16}'' \times \frac{1}{4}'' \times \frac{1}{32}''$.

L.A. 0045. Bronze rivet-plate, oblong, broken one end; cf. L.A. 0026. Only one hole, no rivet; condition good. Found 22. xii. 06. $\frac{11}{16}'' \times \frac{5}{16}'' \times \frac{1}{32}''$.

L.A. 0046. Elliptical bronze binding-ring, made of flat strip bent. Ends do not quite meet. Condition good. Found 22. xii. 06. Diam. $\frac{7}{16}'' \times \frac{1}{4}''$, width $\frac{1}{8}''$.

L.A. 0047. Lump of bronze slag. Diam. $\frac{3}{8}''$.

L.A. 0048. Bronze spatula as L.A. 0039, but smaller and bent; condition poor. Found 22. xii. 06. Length *c.* $1\frac{1}{4}''$, diam. $\frac{1}{16}''$, width of spatula $\frac{1}{8}''$.

L.A. 0049. Bronze ring with incised arrow on flat oval bezel (broken). Condition fair. Found 22. xii. 06. Diam. *c.* $\frac{3}{4}''$, width $\frac{3}{32}''$, width of bezel $\frac{3}{8}''$.

L.A. 0050. Bronze harness-buckle or catch, with iron attachment (or tongue?) at sq. end, incurving sides, and other end pointed. In section would be sq.; only upper edges are bevelled. Condition good. Cf. *Ancient Khotan*, ii. Pl. LI. M. 001. g. Found 22. xii. 06. $1\frac{15}{16}'' \times \frac{3}{4}''$. Pl. XXXVI.

L.A. 0051. Bronze link (?), perhaps from harness. Shape as Char. 0018, but with long triangular opening towards sq. end. Condition fair. Found 22. xii. 06. Length $3\frac{1}{8}''$, width *c.* $\frac{1}{2}''$. Pl. XXXVI.

L.A. 0052. Bronze plaque, lentoid in shape with long flat tongue projecting from middle of one side and doubled under it. Rivet holes in centre of plaque and end of tongue, corresponding to each other. Cf. L.A. VIII–IX. 004, 006. Found 22. xii. 06. Plaque $1\frac{1}{16}'' \times \frac{1}{2}''$. Pl. XXIX.

L.A. 0053. Bronze ring from harness, triangular in section; condition good; part of small iron ring attached. Found 22. xii. 06. Width $\frac{1}{8}''$, diam. $1\frac{1}{16}''$. Pl. XXXVI.

L.A. 0054. Bronze rivet-plate; cf. L.A. 0026, 0045. One end intact, rounded, with one hole; other end broken. $\frac{9}{16}'' \times \frac{3}{8}'' \times \frac{1}{32}''$.

L.A. 0055. Bronze wire, sq. in section, bent into ring; cf. L.A. 0046; condition good. Found 22. xii. 06. Width of wire $\frac{1}{16}''$, diam. of ring $\frac{5}{16}'' \times \frac{7}{16}''$.

L.A. 0056. Bronze loop-handle, of mirror (?). Handle end, an elliptical ring at end of short stem, surface hollowed between raised edges; end for attachment, solid shield-shaped with two rivets projecting upwards. Condition fair. Found 18. xii. 06. Length of whole $2\frac{1}{8}''$; of handle without attachment plate $1\frac{1}{2}''$. Pl. XXXVI.

L.A. 0057. Bronze ring, round in section; condition good. Found 18. xii. 06. Diam. $\frac{7}{8}''$. Pl. XXIX.

L.A. 0058. Fr. of moulded bronze orn., circular, with hollow central boss and flat scalloped edge; cf. V.S. 0035. Condition fair. Found 18. xii. 06. Gr. M. $1''$.

L.A. 0059. Lump of bronze slag broken from end of bar. Found 18. xii. 06. $\frac{1}{2}'' \times \frac{3}{8}'' \times \frac{3}{16}''$.

L.A. 0060. Two frs. of bronze ring, outside incised with cross-lines. Found 18. xii. 06. Diam. *c.* $\frac{3}{4}''$, thickness $\frac{1}{16}''$.

L.A. 0061. Wedge cov.-tablet with seal cav. ($1\frac{1}{2}'' \times 1''$), empty. Blank. Bleached and split; point end perished. Found at eroded ruin near N. wall. $10'' \times 2'' \times \frac{11}{16}''$.

L.A. 0062. Fr. of blown-glass vessel, thick-walled, of yellowish-white translucent glass. On outside, part of wheel-ground hollow ellipse. Found 22. xii. 06. Gr. M. $1\frac{1}{4}''$, thickness $\frac{3}{16}''$.

L.A. 0063. Fr. of crystal, rough cube, yellowish. Found 22. xii. 06. $\frac{5}{8}'' \times \frac{5}{8}'' \times \frac{5}{16}''$.

L.A. 0064. Fr. of blown glass, greenish-white, translucent. Found 22. xii. 06. $\frac{7}{8}'' \times \frac{1}{4}'' \times \frac{1}{8}''$.

L.A. 0065. Fr. of yellow cornelian. Found 22. xii. 06. $\frac{7}{16}'' \times \frac{1}{4}''$.

L.A. 0066. ($\frac{1}{2}$ mile S. of.) **Strip of cast bronze open-work.** Pattern of floral scroll-work, confused. Rich effect produced by innumerable raised dots on both sides; possibly intended to hold enamel, which has now wholly disappeared. One side corroded by sand. $3\frac{1}{8}'' \times 2'' \times \frac{1}{8}''$. Pl. XXXVI.

L.A. 0067. Bronze hook and eye; heart-shaped eye with sq. hole through which is flat hook; other end of hook pierced and broken. Found 20. xii. 06. Length of eye $1''$, of hook $\frac{3}{4}''$. Pl. XXIX.

L.A. 0068. Lead spinning-whorl; flat disc, pierced. Found 20. xii. 06. For others see L.A. 0097–98, 00108, 00109, 00114, 00117, 00137. Diam. $\frac{5}{8}''$, thickness $\frac{1}{8}''$.

L.A. 0069. Bronze arrow-head of type L.A. 0017, but with no depressions in sides. Point flat; condition good. Found 20. xii. 06. Length $1\frac{1}{16}''$. Pl. XXIX.

L.A. 0070. Fr. of blown glass, pale green, translucent. On outside part of two wheel-ground hollow ellipses. Found 20. xii. 06. Gr. M. $\frac{7}{8}''$, thickness $\frac{3}{16}''$.

L.A. 0071–0075. Five frs. of blown glass: *0074* is pale green, the others yellowish-white, translucent. *0071*, *0072*, *0074* are faceted in wheel-ground planes; *0073* has groups of horizontal engraved bands; *0075* (rim) is plain. Found 20. xii. 06. Gr. M. from $1''$ to $\frac{1}{4}''$, thickness $\frac{1}{16}''$ to $\frac{1}{4}''$.

L.A. 0076. Fr. of pottery lamp as L.A. 006, II. 001. Diam. $3''$, h. $1''$.

L.A. 0077. Iron chisel blade (?). Rod sq. in section, with two sides tapering to give broad flat end. From other end projects slender tang sq. in section. $3\frac{1}{4}'' \times \frac{1}{4}''$.

L.A. 0078. Fr. of bronze mirror; cf. L.A. 0027. No orn., edge thickened; condition good. Gr. M. $1\frac{1}{2}''$, thickness $\frac{1}{32}''$, at edge $\frac{1}{8}''$.

L.A. 0079. Fr. of bronze slag. $1\frac{1}{2}'' \times \frac{1}{2} \times \frac{1}{8}''$.

L.A. 0080. Bronze strip, oblong in section, bent into rude ring; cf. L.A. 0046. Condition fair. Diam. $\frac{1}{2}''$, width $\frac{1}{8}''$.

L.A. 0081. Fr. of thin plate bronze; bad condition. Found 18. xii. 06. $2\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{1}{32}''$.

L.A. 0082. Bronze arrow-head, type of L.A. 0017, with triangular depression in one side. Sharp point; remains of iron tang; condition bad. Length with tang $1\frac{7}{8}''$, without $1\frac{3}{8}''$. Pl. XXIX.

L.A. 0083. Strip of bronze with both sides bent over to make a groove or channel. Curved to form part of circle of which diam. would be *c.* 1'. Condition bad, ends broken (?). Length 1' $\frac{7}{8}''$, thickness *c.* $\frac{1}{8}''$. Pl. XXXVI.

L.A. 0084. Fr. of bronze mirror like L.A. 0029; condition fair. Gr. M. 1", thickness $\frac{1}{8}''$ to $\frac{1}{16}''$.

L.A. 0085. Fr. of bronze mirror; cf. L.A. 0027. Gr. M. $\frac{7}{8}''$, thickness $\frac{1}{32}''$.

L.A. 0086. Bronze rod with spiral twist along half its length; condition fair. Length $2\frac{7}{8}''$, diam. $\frac{5}{32}''$ to $\frac{3}{32}''$. Pl. XXIX.

L.A. 0087. Bronze wire bent into oval strap-ring, broken, diamond in section; condition bad. Gr. diam. $1\frac{1}{16}''$.

L.A. 0088. Bronze loop. At one end rod is beaten out convex, but nearer the bend it is flat and decorated with double incised diagonals. Narrow and thick at bend, and at other end beaten out thin and broad. Broken at each end at pierced holes corresponding, through which a rivet fastened the bronze on to a stout stick (?) leaving loop at end free. Length to bend $1\frac{1}{2}''$, width *c.* $\frac{3}{16}''$. Pl. XXXVI.

L.A. 0089. Bronze strap-loop; cf. L.A. vi. ii. 0010; middle closed. $1\frac{9}{16}'' \times \frac{1}{2}''$, thickness $\frac{1}{8}''$ to $\frac{1}{16}''$. Pl. XXXVI.

L.A. 0090. Fr. of iron rod with tang, point broken, sq. in section; cf. L.A. 0077. Length $1\frac{5}{8}''$, diam. $\frac{1}{8}''$.

L.A. 0091. Fr. of iron tool with one broad flat end, prob. chisel; cf. L.A. 0077. Length $1\frac{7}{8}''$, breadth of blade $\frac{1}{4}''$.

L.A. 0092. Iron tool; cf. L.A. 0077 and 0091. Seems complete but for missing handle. Long thin tang, short blade widening to wedge point. Length $2\frac{3}{16}''$, length of handle spike $1\frac{1}{8}''$, width of blade $\frac{5}{16}''$.

L.A. 0093. Strip of iron, oblong in section, bent into V loop. One end doubled laterally on itself, first on one side, then on other, making wide looped top. Possibly end of horse's bit. Brought by Tokhta Ākhūn. $1\frac{3}{4}'' \times \frac{1}{4}'' \times \frac{1}{8}''$. Pl. XXXVI.

L.A. 0094. Bronze ring. On bezel rectilinear incised device, not clear. Diam. $\frac{3}{4}''$, width $\frac{1}{4}''$ to $\frac{3}{32}''$. Pl. XXIX.

L.A. 0095. Rough strip of lead, bent. $1\frac{1}{8}'' \times \frac{1}{4}'' \times \frac{1}{8}''$.

L.A. 0096. Flat iron ring, bad condition. Brought by Tokhta Ākhūn. Diam. $1\frac{1}{16}''$, width *c.* $\frac{3}{16}''$.

L.A. 0097–0098. Two lead spinning-whorls, as L.A. 0068. Brought by Tokhta Ākhūn. Diam. $\frac{5}{8}''$ and $\frac{1}{2}''$, thickness $\frac{1}{8}''$ and $\frac{3}{32}''$. 0097 Pl. XXIX.

L.A. 0099. Iron rod, sq. in section, splintered and broken. Length $1\frac{3}{4}''$, thickness (max.) $\frac{3}{16}''$.

L.A. 00100. Fr. of pottery vase, hand-made, of grey clay showing white granulations; outside covered with green streaky, faintly lustrous glaze. Found 18. xii. 06. Gr. M. $2\frac{1}{4}''$, thickness $\frac{1}{4}''$.

L.A. 00101. Jasper blade, dark grey; bulb on one face, the other with central rib; both edges worked. Found 18. xii. 06. Length $1\frac{4}{5}''$.

L.A. 00102. Jasper blade, grey-brown; bulb on one face, the other ribbed; both edges worked. Found 18. xii. 06. Length $1\frac{7}{10}''$.

L.A. 00103–00105. Three miniature bronze bells, spherical 'grelot' type, as N. 0010. Hollow ball slit below, with loose bead clapper and suspension ring. 00103 corroded and slit joined up. Diam. $\frac{1}{2}''$. Pl. XXIX.

L.A. 00106. Round bronze button, convex, hollowed on inside, from which projects long shank pierced with attachment hole. Found 18. xii. 06. Diam. $\frac{15}{16}''$, length of shank $\frac{11}{16}''$. Pl. XXXVI.

L.A. 00107. Bronze ring, with incised linear design on bezel; condition good. Found 18. xii. 06. Diam. $\frac{3}{4}'' \times \frac{7}{8}''$, width $\frac{3}{16}'' \times \frac{1}{8}''$. Pl. XXIX.

L.A. 00108–00109. Two lead spinning-whorls: 00108 in form of flattened cone, 00109 of disc, pierced; cf. L.A. 0068. Found 18. xii. 06. 00108, diam. $\frac{13}{16}''$, thickness $\frac{1}{4}''$. Pl. XXIX. 00109, diam. $\frac{3}{4}''$, thickness $\frac{1}{8}''$.

L.A. 00110. Sq. bronze rivet-plate or washer; pierced in centre, slightly concave. Found 18. xii. 06. $\frac{1}{2}'' \times \frac{1}{2}''$.

L.A. 00111. Bronze strap-ring, D-shaped; surface flat one side, rounded the other; condition good. Found 18. xii. 06. Diam. $\frac{3}{4}'' \times \frac{7}{8}''$, thickness $\frac{1}{16}''$ to $\frac{5}{32}''$. Pl. XXIX.

L.A. 00112. Ring of gold wire almost sq. in section. Diam. $\frac{3}{4}''$.

L.A. 00113. Fr. of bronze mirror. On back, above, part of border pattern of radiating lines; cf. L.A. 0027. Below, head and forepart of winged dragon in relief; mouth open showing teeth and tongue; large scales on neck; rounded wing as in terra-cotta handles from Yōtkan. Chinese style. Gr. M. $1\frac{3}{4}''$, thickness $\frac{1}{8}''$ to $\frac{3}{16}''$. Pl. XXIX.

L.A. 00114. Lead spinning-whorl, as L.A. 0068. Diam. $\frac{1}{2}$", thickness $\frac{3}{16}$".

L.A. 00115. Bronze rivet with hollow pyramidal head; condition fair. Length of side $\frac{1}{2}$", H. of head $\frac{1}{4}$".

L.A. 00116. Bronze ring, with flat bezel. Traces of incised device, unrecognizable. Diam. $\frac{7}{8}$" × 1", width $\frac{1}{8}$".

L.A. 00117. Lead spinning-whorl, as L.A. 0068. Diam. $\frac{3}{8}$", thickness $\frac{1}{16}$".

L.A. 00118. Bronze ring, with setting for circular stone; condition good. Diam. $\frac{3}{4}$", width $\frac{1}{2}$" to $\frac{1}{8}$". Pl. XXIX.

L.A. 00119. Bronze ring, formed by bending round a flat strip narrowed at each end to a point; condition good. Diam. $\frac{1}{2}$" × $\frac{5}{8}$", width $\frac{1}{8}$" to $\frac{5}{16}$". Pl. XXIX.

L.A. 00120. Bronze rod, widening into curved spatula end; broken at handle end; cf. L.A. 0039. Condition good. Length $1\frac{15}{16}$", diam. $\frac{1}{16}$", width of spatula $\frac{3}{16}$".

L.A. 00121. Bronze rod, sq. in section, spike projecting from one end; condition good. Diam. $\frac{1}{8}$", length of rod $1\frac{3}{8}$", of spike $\frac{1}{8}$".

L.A. 00122. Head of bronze rivet, round, hollow; cf. L.A. 0025. Condition poor. Diam. $\frac{1}{2}$".

L.A. 00123. Bronze rivet-plate, with rivet through one end, and traces of sq. hole in the break at other end; cf. L.A. 0026. $\frac{7}{8}$" × $\frac{3}{8}$".

L.A. 00124. Fr. of bronze rod, oval in section. Length $\frac{5}{8}$", diam. $\frac{1}{8}$".

L.A. 00125. Lump of bronze, roughly spherical, with hole pierced in one side, perhaps for head of rivet. Diam. $\frac{3}{16}$".

L.A. 00126. Fr. of blown glass, from mouth of vessel; yellowish-white, translucent, plain sq. rim. Gr. M. $\frac{7}{8}$", thickness $\frac{3}{32}$", orig. diam. *c.* 5".

L.A. 00127. Glass imitation gem, cut in 'cabochon', greenish, cloudy; perhaps for appliqué on glass. $\frac{3}{8}$ × $\frac{5}{16}$" × $\frac{3}{32}$".

L.A. 00128. Rounded lump of glass, green, translucent, broken; prob. slag. $\frac{3}{8}$" × $\frac{3}{16}$".

L.A. 00129. Wheat grains, carbonized.

L.A. 00130. Paste bead, cylindrical, opaque green. Found 18. xii. 06. $\frac{5}{16}$" × $\frac{1}{4}$".

L.A. 00131. Pitch ring, rough and flat on one side, rounded and worked smooth the other. Diam. outside 1", inside $\frac{7}{16}$".

L.A. 00132. String of twenty-five beads:—1 bugle of black paste with white combings; 5 flattened spheroids, translucent dark blue glass; 2 'nasturtium-seed' beads, translucent greenish-white glass; 1 double-spheroid, amber-coloured glass; 2 discoids, translucent blue glass; 2 sq. bugles, opaque blue glass; 1 triangular bugle, translucent green glass; 1 'nasturtium-seed' bead, opaque blue glass; 1 faceted cube, blue glazed frit; 1 spheroid, blue, yellow, and red *millefiori* glass; 1 spheroid, opaque light blue glass; 3 bugles, opaque light yellow glass; 1 triple ring bead, blue translucent glass; 1 bugle, translucent green glass; 1 ring bead, scored, translucent blue glass; 1 roughly faceted spheroid, translucent dark blue glass. Found 22. xii. 06. Gr. diam. $\frac{1}{2}$", gr. length $\frac{13}{16}$". Pl. XXIX.

L.A. 00133. Disc of horn (?), cut across the grain; hole through centre, $\frac{1}{4}$" to $\frac{1}{2}$" in diam. Found 22. xii. 06. Diam. $1\frac{1}{8}$".

L.A. 00134. Lignite seal, cubical, with broad rounded loop-handle on top. One side of the oblong stamp slightly chipped; corners rounded; design, symmetrical spirals arranged as a Svastika. $\frac{13}{16}$" × $\frac{11}{16}$" × $\frac{3}{4}$". Found 18. xii. 06. Pl. XXIX.

L.A. 00135. Paste bead, bottle-shaped, pierced lengthways but broken across, black with white spiral inlay bands. Found 22. xii. 06. Diam. $\frac{5}{16}$" to $\frac{5}{8}$", length of fr. $\frac{7}{16}$". Pl. XXIX.

L.A. 00136. String of eight beads:—1 roughly spherical, cornelian; 1 lentoid, faceted, pale green translucent glass; 3 flattened spheroids, opaque blue glass; 1 discoid, translucent dark blue glass; 2 spheroids, light green paste; and ring of blue-grey steatite. Gr. diam. $\frac{1}{2}$", gr. length $\frac{3}{8}$".

L.A. 00137. Lead spinning-whorl, flat disc pierced, as L.A. 0068. Found 22. xii. 06. Diam. $\frac{3}{4}$", thickness $\frac{1}{8}$".

L.A. 00138. ($\frac{1}{2}$ mile S. of.) **Fr. of shoe-sole of woven string,** hard and compact, encrusted with sand and brittle. Found 20. xii. 06. $3\frac{3}{4}$" × $1\frac{1}{4}$".

L.A. 00139. a–e. String of five glass beads:—(*a*) pale blue, form of carinated tumbler. Pl. XXIX; (*b*) faceted lentoid, purple; (*c*) spheroid, translucent blue; (*d*) three-faceted bugle, amber yellow; (*e*) double spheroid, amber yellow. Gr. diam. $\frac{1}{2}$", gr. length $\frac{1}{2}$".

L.A. 00140. Glass bead, blue spheroid. Diam. $\frac{1}{4}$".

L.A. 00141. String of five beads:—1 discoid, dark blue translucent glass; 2 spheroids, dull grass-green paste; 1 ring and 1 spheroid, blue-grey opaque glass. Gr. diam. $\frac{1}{2}$", gr. length $\frac{5}{16}$".

L.A. 00142. Disc of white stone. Diam. $\frac{1}{8}$", thickness $\frac{1}{8}$".

L.A. 00143. Cowrie shell; hole pierced, $\frac{3}{16}$" in diam. Length $\frac{9}{16}$".

L.A. 00144. Bead of red cornelian, half of spheroid, roughly cut. Diam. $\frac{3}{8}$".

L.A. 00145. (2 or 3 miles E. of.) **Jade celt,** green; faces polished and sides left rough; straight cutting edge. Found by Mullah, 20. xii. 06. See R. A. Smith in *Man*, xi. 6, No. 52. Length 2". Pl. XXX.

L.A. 00146. Pottery fr., hand-made, of well-levigated dark grey clay, evenly fired, apparently shaped in a wicker basket as L.A. 002. $1\frac{15}{16}'' \times 1\frac{3}{4}'' \times c.\ \frac{1}{8}''$. Pl. XXXVI.

L.A. 00147. Fr. of buff silk quilted garment (?), three or four layers thick, and crossed for the most part by parallel seams $\frac{1}{4}''$ to $\frac{3}{4}''$ apart. Torn and brittle. Cf. L.A. IV. ii. 001. *C.* $1'\ 8'' \times 11\frac{1}{2}''$.

L.A. 00148. Shells of '*Linnaea auricularia*, Linn.' Found in soil (hard sediment) 10′ below brick mound L.A. XI. [Identified by Col. Godwin Austen.]

L.A. 00149. Fr. of cotton canvas, coarse white, plain weave. [Analysed by Dr. Hanausek.] $6\frac{1}{2}'' \times 5''$.

L.A. 00153. Jasper blade, purplish black; bulb-cavity on one face, the other ribbed, and one edge worked Length $1\frac{3}{10}''$.

L.A. 00154. Jasper blade, brownish dark-grey; bulb on one face, the other ribbed, both edges worked. Length $2\frac{3}{8}''$.

L.A. 00155. Jasper blade, dark grey; bulb on one face, the other ribbed, one edge worked. Length 1″.

L.A. 00156. Jasper blade, black; bulb on one face, the other ribbed, both edges worked. Length $1\frac{3}{8}''$.

L.A. 00157. Jasper blade, dark grey; bulb on one face, the other with central rib, edges worked. Length 1″.

L.A. 00158. Jasper blade, dark grey; bulb on one face, the other ribbed, edges worked. Length $1\frac{1}{10}''$.

L.A. 00159. Jasper blade, green, one face ribbed, sand-worn. Length $1\frac{1}{10}''$.

L.A. 00160. Jasper point, black, with flaked faces and worked edges, thickest at butt, dull point; the whole sand-worn. See R. A. Smith in *Man*, xi. 6, No. 52. Length $1\frac{3}{01}''$. Pl. XXX.

L.A. 00161. Fr. of bronze rod. $\frac{11}{16}'' \times \frac{5}{16}'' \times \frac{3}{16}''$.

L.A. 00162. Fr. of lead slag. Length $1\frac{1}{8}''$.

L.A. 00163. Fr. of bronze mirror (?); cf. L.A. 0027. No orn. Gr. M. $1\frac{1}{8}''$.

L.A. 00164. Bronze bell of spherical 'grelot' type; clapper gone and suspension ring broken; cf. L.A. 00104. Diam. $\frac{5}{8}''$.

L.A. 00165. a–e. Five glass beads, flattened lentoids, translucent brown. Found 18. xii. 06. $\frac{5}{8}'' \times \frac{3}{8} \times \frac{1}{4}''$. a–b. Pl. XXIX.

L.A. 00166. a–h. Eight glass beads, dark blue, semi-translucent:—1 triangular bugle, 1 ring, 3 flattened spheroids, 2 faceted spheroids, and 1 'nasturtium-seed'. Found 18. xii. 06. Gr. diam. $\frac{1}{2}''$.

L.A. 00167. a–d. Four glass beads, gilded:—1 double spheroid, 2 spheroids, 1 cylindrical; cf. L.A. 00171. Found 18. xii. 06. Gr. diam. $\frac{3}{16}''$.

L.A. 00168. a–d. Four frs. of blown glass, yellowish-white, translucent; one has lump of same glass on outer surface, prob. terminal of applied thread-work. Found 18. xii. 06. Gr. M. 1″.

L.A. 00169. Ten beads:—3 irregular spheroids, ruby (broken) and cornelian; 2 irregular spheroids, white chalcedony; 1 spheroid, crystal; 2 dumb-bells, yellow paste; 1 dumb-bell, blue paste; 1 ribbed spheroid, translucent light green glass. Found 18. xii. 06. Gr. M. $\frac{1}{2}''$.

L.A. 00170. Ten glass beads:—1 spheroid, translucent green glass and 3 blue; 1 ribbed spheroid, pale blue translucent glass; 2 flattened spheroids, opaque light blue glass; 3 rings (two joined), opaque black paste. Gr. M. $\frac{1}{2}''$.

L.A. 00171. a–d. Four glass beads, gilded:—(*a*) triple, (*b*) double, (*c*) single spheroid, (*d*) elongated and bulbous; cf. A. Kisa, *Das Glas im Altertume*, p. 834; Woolley and MacIver, *Karanog*, p. 75. (*d*) Pl. XXIX.

L.A. 00172. Seven beads:—1 spheroid, crystal; 2 frs. of cornelian, broken; 2 brown glass, one flat, one sq. in section; 1 bugle, yellow paste, fr. of; 1 green glass, five rings joined. Found by Jasvant Singh about Stūpa, 18. xii. 06. Gr. M. $\frac{1}{2}''$.

L.A. 00173. a–c. Three frs. of blown glass, yellowish-white, translucent; one shows rim, round in section, solid, apparently of bowl; another has remains of moulded pattern in relief. Gr. M. $1\frac{1}{4}''$. (*a*) Pl. XXIX.

L.A. 00174. a–e. Misc. bronze frs.:—(*a*) point of arrow-head; cf. L.A. 0069; (*b*) small lump of slag; (*c–e*) wires bent to form rings; (*f*) part of orn. in plate bronze; broken, but shows trefoil. Found 18. xii. 06. Gr. M. $\frac{1}{2}''$.

L.A. 00177. a–h. Misc. bronze frs.:—(*a*) nail with pyramidal head. Pl. XXIX; (*b*) nail with pear-shaped head. Pl. XXIX; (*c*) nail with circular head; (*d*) stud with banjo-shaped base. Pl. XXIX; (*e*) fr. of rod sq. in section; (*f*) fr. of bronze slag; (*g*) fr. of ear-ring; (*h*) string of small 'goose-eye' coins, *c.* 16, corroded into solid tube *c.* $\frac{1}{4}''$ in diam. Pl. XXIX. Found on eroded ground, 18. xii. 06. Gr. M. $1\frac{1}{2}''$.

OBJECTS EXCAVATED IN, OR NEAR, RUIN L.A. I.

L.A. I. 001. Bronze ring, ribbed and orn. with raised band of cable pattern, its ends flattened at juncture; hard green patina. Diam. $\frac{3}{4}''$, width $\frac{1}{4}''$. Pl. XXIX.

L.A. I. 002. Roll of yellow silk fabric, unused; very dry and brittle; broken in two; plain weave. Found on completely eroded ground, S. of L.A. Stūpa and near

L.A. I. Length complete $1' 6\frac{3}{4}''$, diam. $2\frac{1}{2}'' \times 1''$. See above, pp. 373 sq. Pl. XXXVII.

L.A. I. ii. 1. Oblong tablet; pieces split from each long edge. *Obv.* blank. *Rev.* 4 ll. Khar., faint. $4\frac{5}{8}'' \times 1\frac{1}{2}'' \times \frac{1}{4}''$.

L.A. I. ii. 2. Oblong tablet. *Obv.* blank; notch cut in one edge. *Rev.* 5 ll. Khar., faint. $4\frac{9}{16}'' \times 1\frac{5}{8}'' \times \frac{5}{16}''$.

L.A. I. ii. 001. Fr. of short-pile woollen carpet (in two pieces). Construction like L.A. VI. ii. 0046, but finer in texture. Tufts on back closer together laterally and shorter. Figure pile very short and compact. Colours used—a very rich claret, bright blue, dark brown (natural), light brown, and buff, on a claret ground; pattern unintelligible. Much worn; colours where present very bright. $1' 8\frac{1}{2}'' \times 1'$ (irregular) and $8'' \times 5\frac{1}{2}''$. Pl. XXXVII.

L.A. I. iii. 001. Wooden bar, flat, widened towards centre, where is hole 1″ diam. lined with leather to prevent friction by object revolving within it; ends sq.; at each end a hole $\frac{3}{8}''$ diam. Prob. a stay, e. g. for churn, pegged to either side of barrel and receiving top of spindle which would be turned by a handle above. Neatly finished with bevelled edges; well preserved; cf. L.A. IV. iii. 001. Length $1' 3\frac{3}{4}''$, breadth $\frac{15}{16}''$ to $2\frac{1}{8}''$ at centre, thickness $\frac{5}{8}''$.

L.A. I. iv. 5. Piece of tamarisk wood covered with bark. On inside 2 ll. Khar., faint, by complete end, and traces of Khar. by broken end. Much sand-encrusted. $10'' \times 2'' \times \frac{5}{16}''$.

L.A. I. iv. 6. Wedge cov.-tablet. *Obv.* seal cav. ($1\frac{1}{2}'' \times 1''$), $1\frac{3}{8}''$ from sq. end, empty; blank. *Rev.* blank. $9\frac{1}{8}'' \times 1\frac{3}{4}'' \times \frac{3}{4}''$ to $\frac{3}{16}''$.

L.A. I. iv. 7. Three frs. of paper MS., sand-encrusted, showing remains of five ll. Khar. in straggling hand, rather faint, on one side. Largest fr. *c.* $4'' \times 5''$.

L.A. I. iv. 11. a–b. Two sets of wooden armour scales (?), six in (*a*) and five in (*b*). Flat sq.-headed 'labels' with wedge-shaped points. Two holes pierced through sq. head, having sunken border at each end. Work careless; neither size nor position of holes uniform. Average size $3'' \times 1'' \times \frac{1}{4}''$. (*a*) Pl. XXXV.

L.A. I. iv. 001. Pottery fr., fine-grained, hard-baked, covered with dark green glaze and orn. with incised scroll or floral pattern. Part of flat dish. Prob. local fabric, the glaze showing Western influence. $3\frac{1}{2}'' \times 2\frac{1}{2}'' \times c.\ \frac{3}{8}''$. Pl. IV.

L.A. I. iv. 002. Fr. of pottery vessel of hard thick grey clay covered on both sides with finely crackled leaf-green glaze. Chinese, Han type. $1'' \times 1\frac{1}{8}'' \times \frac{1}{4}''$.

L.A. I. iv. 003. Fr. of mica. $1\frac{3}{8}'' \times 1\frac{3}{4}'' \times \frac{1}{16}''$.

L.A. I. iv. 004. Pottery fr., disc, slightly concave, ground and pierced to form spinning-whorl. Convex side roughly polished. Clay coarse and black, hand-made. Diam. $1\frac{3}{4}''$, thickness $\frac{1}{4}''$. Pl. XXXVI.

L.A. I. iv. 005. Rim of bronze dish (?), distorted; condition good. $2'' \times \frac{7}{8}''$.

L.A. I. iv. 006–007. Pair of wooden sticks, round and tapering, sand-encrusted; cut roughly flush at broad end; perhaps eating-sticks. Cf. M. Tagh. a. 0019. Length $8\frac{1}{2}''$, diam. $\frac{1}{8}''$ to $\frac{1}{4}''$.

L.A. I. iv. 008. Bowl of wooden spoon; cf. L.A. VI. ii. 0017, but bowl here slightly hollowed; stem broken. Width of bowl $1\frac{7}{16}''$, thickness $\frac{1}{8}''$, handle $\frac{3}{16}'' \times \frac{3}{8}''$.

L.A. I. iv. 009. Wooden 'chūluk'; carefully rounded stick with roughly pointed end, near which is a notch all round; carved out of one piece with a 'hammer-head' or flat cross-piece, thickened at back to receive it. See also L.B. IV. ii. 009; N. XIII. i. 002; Ka. I. 008. Length $4\frac{5}{8}''$, diam. $\frac{7}{16}''$, length of cross-piece $2\frac{1}{8}''$, width of cross-piece $\frac{11}{16}''$. Pl. XXXV.

L.A. I. iv. 0010. Plaited string handle, thick goat's-hair. $8\frac{1}{2}'' \times 1\frac{1}{16}''$.

L.A. I. iv. 0011. Fabric frs.; brown red and buff woollen and fine silk, with frs. of leather and of yellow, red, and scarlet felt. [Analysed by Dr. Hanausek.] Average length *c.* 5″, width *c.* 3″.

L.A. I. iv. 0012. a–b. Two frs. of mica. Gr. M. 2″.

L.A. I. iv. 0013. Fr. of skin from a callosity. Gr. M. 1″.

L.A. I. iv. 0014. Small block of wood, sq. in section, with lines rudely incised, on one side equidistant ($\frac{1}{2}''$ apart) and at right angles to length, on another side at angles. Perhaps a carpenter's rough measure and guide for dove-tailing. $2\frac{1}{2}'' \times \frac{7}{16}''$ sq. Pl. XXXV.

L.A. I. iv. 0015. Fr. of lacquered wooden bowl; flat bottom of; lacquered black on both sides. Gr. M. $4\frac{1}{2}''$.

L.A. I. iv. 0016. Two frs. of thick paper, doubled and stuck together. On one, two or three Khar. chars. (?). Gr. M. $4\frac{3}{4}'' \times 3\frac{1}{2}''$.

OBJECTS EXCAVATED IN RUIN L.A. II

L.A. II. 001. Pottery lamp, hand-made, of ill-levigated reddish clay; lip only just pinched out; no firm base; cf. L.A. 006. Diam. $2\frac{5}{8}''$, H. $1\frac{1}{4}''$.

L.A. II. 002. Fabric frs., of buff hemp and cotton materials of canvas-like texture, with frs. of buff silk and leather and of coarse brown matting woven of goat's-hair string. 'The cotton resembles mercerized cotton and was probably soaked in alkaline liquid.' See Hanausek and Winton, *Microscopy of Technical Products*, New York, 1907, p. 66. [Analysed by Dr. Hanausek.] Gr. fr. $1' 2'' \times 9''$.

L.A. II. i. 001. Wedge cov.-tablet, part of. Point cut off. *Obv.* seal cav. empty ($1\frac{3}{16}'' \times 1''$), $\frac{3}{8}''$ from sq. end; blank. *Rev.* blank. $4'' \times 1\frac{3}{8}'' \times \frac{5}{16}''$.

L.A. II. ii. 001. a–b. Two frs. of silk fabric; (*a*) white, very fresh, plain weave, part of $\frac{1}{2}''$-wide band. $1\frac{5}{8}'' \times \frac{1}{2}''$; (*b*) pale greenish-blue, slightly corded weave, worn. *C.* $3\frac{1}{8}'' \times 2\frac{1}{4}''$.

L.A. II. ii. 002. Dried muscle (?), knotted strip, apparently frayed out for use in stitching leather. Length *c.* 9″.

L.A. II. ii. 003. Wedge under-tablet. *Obv.* one l. Khar., faint. *Rev.* one l. Khar., faint. Sand-encrusted, rotten. $5\frac{3}{4}'' \times 2\frac{1}{2}'' \times \frac{11}{16}''$.

L.A. II. v. 5. Oblong tablet, broken at one end, found embedded in floor below platform. *Obv.* one end three ll. Khar., other end one l. Khar., very faint. *Rev.* traces of two ll. Khar. at one end. Utterly rotten and surface almost destroyed. $8\frac{1}{4}'' \times 1\frac{1}{2}'' \times \frac{3}{4}''$.

L.A. II. v. 001. Fr. of bowl (?), with horizontal ridge running round sides. Hard slaty-grey clay, wheel-made, kiln-fired, with deep leaf-green glaze on outside. Prob. Chinese, Han dynasty. $3'' \times 1\frac{3}{8}'' \times \frac{1}{4}''$.

L.A. II. v. 002. Round bronze bolt, pierced at one end and with sq. head at the other; condition good. Length $2\frac{5}{8}''$, diam. $\frac{7}{16}''$. Pl. XXXVI.

L.A. II. vi. 001. Wooden 'inch' measure; flat wooden strip incised on one side with nine cross-lines $1\frac{3}{16}''$ apart; central line crossed again by diagonals, indicating use of decimal system. Warped. $11\frac{7}{8}''$ (0·302 m.) $\times \frac{13}{16}''$ to $\frac{11}{16}'' \times \frac{3}{8}''$. See above, p. 374. Pl. XXXV.

OBJECTS EXCAVATED IN, OR NEAR, STRUCTURE L.A. III

L.A. III. 001. Bronze arrow-head; type of L.A. 0017, condition poor. Length $1\frac{1}{8}''$. Pl. XXIX.

L.A. III. 002. Pottery fr. from edge of dish. Clay, pink and hard, covered with faintly lustrous pale green slip with blotches of darker green (manganese?). Prob. Chinese, Han dynasty. Length $1\frac{1}{4}''$.

L.A. III. 003. Bronze rivet with flat triangular head having edges bevelled on top; condition fair. See L.A. VI. ii. 009. Length $1\frac{1}{8}''$. Pl. XXIX.

L.A. III. 004. Lug of wooden bowl, lacquered. Lug black, inside of bowl red applied over black. See L.A. VIII. 002. $4'' \times \frac{7}{8}'' \times \frac{5}{8}''$.

L.A. III. 005. Fabric frs., including small piece of coarse yellowish woollen fabric, plain weave, with frayed threads of red wool and bit of knotted dark blue woollen cord, made in manner of military braid, sq. in section. [Analysed by Dr. Hanausek.] Fabric $10'' \times 1\frac{1}{2}''$, cord $4'' \times \frac{1}{10}''$.

L.A. III. 006. Fr. of blown-glass vessel. Tops of two wheel-ground grooves on outside. Yellowish-white translucent glass. Gr. M. $1\frac{1}{8}''$, thickness $\frac{3}{32}''$.

L.A. III. 007. Fr. of matting (?). Four quills, the plumes trimmed off, pierced with two holes and threaded on one string. $1\frac{3}{8}''$ (orig. length) $\times \frac{3}{8}''$.

L.A. III. i. 001. Flat oblong piece of wood with rounded ends; V-shaped groove cut inwards all round sides. Perhaps for winding thread (?), but seems hardly wide enough. Cf. M. Tagh. a. iv. 00176. $1\frac{5}{8}'' \times 1\frac{1}{4}'' \times \frac{1}{4}''$. Pl. XXXV.

L.A. III. i. 002. Wooden writing style (?). Tapering stick trimmed to irregular octagon in section and lacquered black; black covered by a coat of red lacquer for $1\frac{1}{4}''$ from end. Length 5″, diam. $\frac{3}{8}''$ to $\frac{3}{16}''$.

L.A. III. i. 003. Chip off wooden slip. *Obv.* two ll. Khar. faint. $1\frac{1}{8}'' \times \frac{5}{8}'' \times \frac{1}{16}''$.

L.A. III. ii. 3. Chip off wooden slip. *Obv.* one l. Khar. clear. $1\frac{1}{2}'' \times \frac{1}{2}'' \times \frac{1}{16}''$.

OBJECTS EXCAVATED AT DWELLING L.A. IV

L.A. IV. 001. Wedge under-tablet; pointed end much broken and bleached. *Obv.* four ll. Khar. *Rev.* single Khar. char. at sq. end. Soft, bleached, and cracked. From refuse to N.E. $9\frac{1}{4}'' \times 2\frac{5}{8}'' \times \frac{3}{16}''$.

L.A. IV. 002. Three frs. of rope of twisted grass or straw. Gr. length *c.* 2′ 7″.

L.A. IV. 003. Fabric frs., very coarse dark brown woollen material. Warp set tight and woof threads pressed close together, giving ribbed appearance. Firm and even in texture. Had enveloped tablets L.A. IV. ii. 1–3. *C.* 2′ × 1′.

L.A. IV. 004. Two frs. of coarse woollen material. Warp of fine brown thread, very close; weft red and ochre yellow with alternating bands of blue and white. All weft threads are two-ply. Satin weave throughout. Many of the warp threads are floating on back, owing to decay of weft in places. Pattern, an all-over lozenge, open, in red, of $\frac{3}{4}''$ sides with rectangle of mixed red and yellow at the junctions. Each lozenge is inhabited by a centre stem springing from one obtuse angle, dividing into two leaves, and bearing at top a spot to represent a flower. A narrow band of alternate blue and yellow, and white and yellow, passes transversely through lozenges dividing leaves from flower, interrupted by the red and yellow rectangles. Weaving close and regular; colour well preserved. 1′ × 8″ and $5'' \times 1\frac{1}{2}''$. Pl. XXXVII.

L.A. IV. ii. 1. Rectang. double tablet. Cov.-tablet: $7\frac{3}{8}'' \times 2\frac{3}{4}''$. *Obv.* seal cav. ($1\frac{1}{4}'' \times 1\frac{3}{4}''$) with strings, but seal gone. Above cav. two ll. Khar., below one l. Khar., faint but legible. *Rev.* blank.

Under-tablet: *Obv.* seven ll. Khar., black and clear. *Rev.* blank. Well preserved. $7\frac{5}{16}'' \times 2\frac{3}{4}'' \times 1''$ (max.).

L.A. IV. ii. 2. Rectang. double tablet. Cov.-tablet: $6\frac{1}{4}'' \times 2\frac{3}{4}''$. *Obv.* seal cav. ($1\frac{1}{4}'' \times 2''$) empty. Blank. *Rev.* three ll. Khar., first faint, others clear.

Under-tablet: *Obv.* seven ll. Khar., all except first and seventh black and clear. *Rev.* blank. Well preserved, lower tablet split. $6\frac{1}{8}'' \times 2\frac{5}{8}'' \times \frac{13}{16}''$. Pl. XXXVIII.

L.A. IV. ii. 3. Rectang. double tablet, complete. Cov.-tablet: $7\frac{7}{8}'' \times 4\frac{3}{4}''$. *Obv.* seal cav. ($3\frac{1}{4}'' \times 1\frac{3}{8}''$) with broken strings and traces of sealing of red clay. Blank. *Rev.* traces of one l. Khar. running almost diagonally across.

Under-tablet: *Obv.* seven ll. Khar. distinct except lower lines and L. end. *Rev.* blank. Well preserved, but warped and split at ends. $11\frac{3}{4}'' \times 4\frac{3}{4}'' \times 1\frac{1}{8}''$ (max.).

L.A. IV. ii. 001. Two frs. of thick cotton fabric, brownish, very dirty, wrapped round Khar. tablets, L.A. IV. ii. 1–2. Very close and firm texture. Lines of raised tufts standing close together run across the stuff at intervals of $\frac{1}{4}''$ to $\frac{3}{8}''$, and where these occur, two or three shoots of extra thick weft are carried across in such a way as to form a strong backing to the rows of tufts. Prob. intended for wear under armour, as a gambeson; cf. L.A. 00147. [Analysed by Dr. Hanausek.] Gr. fr. $10'' \times 5\frac{1}{2}''$.

L.A. IV. iii. 001. Wooden bar, increasing in width at centre and at ends, where are holes. Prob. a stay for spindle of churn as L.A. I. iii. 001. Neatly finished with bevelled edges; good condition; broken in half, but mended. Length $10''$, thickness $\frac{9}{16}''$, width $\frac{1}{2}''$ to $1\frac{1}{8}''$, diam. central hole $\frac{3}{4}''$, end hole $\frac{3}{8}''$. Pl. XXXV.

L.A. IV. iv. 1. Fr. of rectang. under-tablet. *Obv.* part of two ll. Khar. *Rev.* blank. $2\frac{7}{8}'' \times 1\frac{1}{4}'' \times \frac{3}{8}''$ (max.).

L.A. IV. v. 1. Wedge cov.-tablet with empty seal cav. ($1\frac{3}{8}'' \times \frac{7}{8}''$). *Obv.* blank. *Rev.* faint traces of one l. Khar. near edge. Bleached and cracked. $1'\,1\frac{3}{4}'' \times 2'' \times \frac{3}{4}''$ (max.).

L.A. IV. v. 2. Rectang. cov.-tablet with empty seal cav. ($1'' \times 1\frac{3}{8}''$). Blank. Hard, but bleached and cracking. $8\frac{3}{8} \times 3\frac{5}{8}'' \times \frac{9}{16}''$ (max.).

L.A. IV. v. 3. Oblong tablet. *Obv.* four columns Khar.; first, faint, has at least three ll., second five ll., third five ll., fourth three ll. *Rev.* blank. Bleached, and edges peeling. $11\frac{1}{8}'' \times 2\frac{5}{8}'' \times \frac{5}{16}''$.

L.A. IV. v. 5. Wedge cov.-tablet, wood perished, point end broken. Seal cav. ($1\frac{1}{2}'' \times 1\frac{3}{8}''$) empty, but retaining string. *Obv.* traces of Khar. chars. at sq. end. *Rev.* one l. Khar. incomplete. $7\frac{3}{4}'' \times 2\frac{1}{2}'' \times \frac{1}{2}''$.

L.A. IV. v. 6. Fr. of tablet. *Obv.* four ll. Khar. indistinct. *Rev.* traces of four ll. Khar. indistinct. Much perished. $5'' \times 5\frac{1}{2}'' \times \frac{1}{2}''$.

L.A. IV. v. 7. Oblong tablet warped almost into semicircle. *Obv.* traces of six ll. Khar., only part distinct. *Rev.* traces of four columns Khar. of four or five ll. each; very clear. Wood bleached and much perished. $11\frac{9}{16}'' \times 5\frac{1}{2}'' \times \frac{7}{16}''$.

L.A. IV. v. 8. Wedge cov.-tablet, point end split away. *Obv.* empty seal cav. *Rev.* traces of part of one l. Khar. Surface decayed and encrusted. $8'' \times 2\frac{1}{2}''$.

L.A. IV. v. 9. Wedge under-tablet. *Obv.* seven ll. Khar., six in column, seventh single; clear and black. *Rev.* blank. Much bleached on rev.; split and peeling at point end. $11\frac{3}{4}'' \times 3\frac{1}{4}'' \times \frac{1}{4}''$.

L.A. IV. v. 10. Oblong tablet, blank. Surface on both sides cracked and peeling. $7\frac{1}{2}'' \times 2\frac{1}{16}'' \times \frac{1}{4}''$.

L.A. IV. v. 11. Oblong tablet with one rounded end; blank. Hard, but much injured. $1'\,3'' \times 2\frac{7}{8}'' \times \frac{1}{2}''$ max.

L.A. IV. v. 12. Oval-topped tablet. *Obv.* two irregular columns Khar. of nine and seven ll., faded but mostly clear. *Rev.* blank. Well preserved, rev. bleached. $6\frac{1}{2}'' \times 3\frac{7}{8}'' \times \frac{5}{8}''$. Pl. XXXVIII.

L.A. IV. v. 001. Piece of wood slightly curved; in centre sq. in section, broader and thinner at rounded ends. Through each is a perpendicular hole, showing marks of a strap on outer edges, and through centre is oblong hole, horizontal. The convex side of bar has a concave groove worn lengthways, as if by constant friction from a rounded surface. The concave under-surface is polished by wear all along its length. Prob. part of the saddle gear of a pack-animal. Length $9''$, thickness $\frac{3}{4}''$ to $1''$, width $1''$ to $1\frac{7}{8}''$, diam. end holes $1''$, centre hole $\frac{1}{2}''$ to $\frac{3}{4}''$. Pl. XXXV.

L.A. IV. v. 002. Fabric frs., including several pieces of woollen *darri*, much torn. Structure of the latter, two-ply weft on fine warp; pattern apparently in transverse bands, as follows:—(1) Rows of dark blue circular rosettes, with four heart-shaped petals and buff centres and buff dividing lines to petals, set out diagonally on buff ground. This band (of an uncertain number of rows) is bordered by half-lozenges in solid blue, the obtuse angles pointing outwards and the acute angles joining. (2) A single row of lozenges in double outline, red, angle to angle, on buff ground. (3) A single row of dark blue rosettes as in (1) on saffron ground. (4) as (2). Then (1) again. Well made, colours fresh, thread rotten. Gr. fr. $5\frac{3}{4}'' \times 4\frac{1}{4}''$. Pls. XXXVII, XLIX.

Also several frs. of buff and red woollen fabrics, loosely woven and of fine yarn, some roughly sewn together; fr. of woven string shoe and of buff felt. Gr. length $10\frac{1}{2}''$.

OBJECTS EXCAVATED IN STRUCTURES L.A. V AND VI

L.A. v. 001. Fr. of wooden comb, with arched top; broken both sides; bad condition. H. $2\frac{1}{4}''$, length of teeth $1''$, *c.* 4 teeth to $\frac{1}{4}''$.

L.A. v. i. 5. Oblong tablet, long slip split from. *Obv.* blank. *Rev.* one l. Khar. faint; hard. $8\frac{1}{4}'' \times \frac{3}{4}'' \times \frac{3}{16}''$.

L.A. v. i. 6. Wedge cov.-tablet. *Obv.* seal-cav. ($1\frac{1}{2}'' \times \frac{15}{16}''$), $\frac{1}{4}''$ from sq. end, empty, pierced with hole; blank. *Rev.* one short l. Khar. (?), very faint. Bleached. $4\frac{7}{8}'' \times 1\frac{1}{4}'' \times \frac{3}{8}''$.

L.A. v. i. 7. Rectang. cov.-tablet. *Obv.* seal cav. ($1\frac{1}{4}'' \times \frac{7}{8}''$), empty; blank. *Rev.* blank. Bleached and split. $7\frac{1}{4}'' \times 4\frac{1}{2}'' \times \frac{5}{8}''$ max.

L.A. v. ii. 1. Wooden fire-stick, 'female', rectang. in section with four 'hearths' close to one edge, which had been notched. In centre is hole, through which is short thong attached to short pointed stick; the other end conical and showing signs of fire; prob. an old 'male' fire-stick, broken and cut down for use as peg. See Joyce in *Man*, xi. 3, No. 24, Fig. 5. Length of stick $3\frac{3}{4}''$, of peg $2\frac{13}{16}''$. Pl. XXXV.

L.A. v. ii. 2. Oblong tablet. *Obv.* traces of four ll. Khar., very faint. *Rev.* the same. Wood hard, but surface perished. $3\frac{3}{8}'' \times 1\frac{3}{4}'' \times \frac{3}{16}''$.

L.A. v. ii. 4. Rectang. cov.-tablet, part of. Sides have been split off and V-shaped notch cut in one end. *Obv.* seal cav. ($1\frac{1}{2}'' \times 1\frac{3}{8}''$), empty; blank. *Rev.* one l. Khar. $6\frac{3}{8}'' \times 1\frac{1}{2}'' \times \frac{1}{2}''$ max.

L.A. vi. 001. Bronze terminal, perhaps from curved rail of piece of furniture; outline nearly semicircular, ending in lioness's head rudely cast. Hollow and up to chin of lioness semicircular in section, being open beneath to fit on to curved wooden (?) surface. Broken behind. Length $2''$, diam. $\frac{5}{8}''$. Pl. XXXVI.

L.A. vi. 002. Wooden leg of piece of furniture. Bevelled ring base; round leg, starting thin, swells to same diam. as foot, then narrows quickly. Above, fr. of tenon. Not turned, but trimmed round with a knife. Shows traces of green paint, perhaps part of leaf pattern. H. $5\frac{1}{4}''$, H. of foot $\frac{3}{4}''$, diam. $\frac{7}{8}''$ to $1\frac{1}{2}''$. Pl. XXXV.

L.A. vi. 003. Tārīgh (millet) grains from rubbish-heap.

L.A. vi. 006. Bronze bell, 'grelot', as L.A. 00103, with suspension ring. Gr. M. $\frac{1}{2}''$.

L.A. vi. 007. Pottery fr. from hand-made vessel of poorly levigated clay, hard-fired on an open hearth and blackened by 'smothering'. Orn. at top with applied strip which is notched; beneath this is row of single stamped circles at intervals, and below this again traces of incised orn. $2\frac{3}{4}'' \times 2\frac{1}{4} \times \frac{1}{4}''$. Pl. XXXVI.

L.A. vi. i. 1. Rectang. cov.-tablet. *Obv.* seal cav. ($1\frac{9}{16}'' \times 1\frac{1}{16}''$), empty; blank. *Rev.* blank. Bleached and split. $7\frac{5}{16}'' \times 4\frac{3}{16}'' \times \frac{7}{16}''$ max.

OBJECTS EXCAVATED FROM REFUSE-HEAP L.A. vi. ii.

L.A. vi. ii. 1. Pottery fr., hand-made, of well-levigated clay, orn. on outside with three horizontal bands of comb-drawn 'wave' pattern, separated from each other by bands of incised lines. $4\frac{3}{16}'' \times 3\frac{1}{2}'' \times \frac{5}{16}''$. Pl. XXXVI.

L.A. vi. ii. 010. Oblong tablet. *Obv.* blank; edges bevelled and V-shaped groove cut in middle of three sides. *Rev.* seven ll. Khar., faint. $4'' \times 2'' \times \frac{1}{4}''$.

L.A. vi. ii. 061. Part of tablet, afterwards cut into ellipse with three string grooves sawn. *Obv.* two ll. Khar. at one end. *Rev.* three ll. Khar. at same end. Faint. $3\frac{1}{2}'' \times 2\frac{1}{8}'' \times \frac{1}{8}''$.

L.A. vi. ii. 062. Wedge cov.-tablet, part of; broken at seal cav. *Obv.* one l. Khar. at sq. end, faint. *Rev.* blank. $3'' \times 1\frac{9}{16}'' \times \frac{1}{4}''$.

L.A. vi. ii. 064. Fr. of cov.-tablet. *Obv.* part of empty seal cav. *Rev.* one l. Khar., faint. $2\frac{1}{16}'' \times \frac{3}{8}'' \times \frac{1}{4}''$.

L.A. vi. ii. 0102. Fr. of paper MS., showing portions of seven ll. Khar. on one side. $3\frac{1}{2}'' \times 1\frac{1}{2}''$. Pl. XXXVIII.

L.A. vi. ii. 0103. Fr. of paper MS., showing on one side two ll. Khar., almost complete. $1'' \times 9\frac{3}{4}''$. Pl. XXXVIII.

L.A. vi. ii. 0104. Fr. of paper MS., broken on all edges but one, showing on one side part of four ll. Early Sogdian. See Dr. A. Cowley, *Another Unknown Language from Eastern Turkestan*, *J.R.A.S.*, Jan. 1911. Gr. M. *c.* $4\frac{1}{2}''$. Pl. CLIII.

L.A. vi. ii. 0234. Paper MS. (complete ?), showing on obv. seven ll. Khar., clear, black; on rev. parts of two sloping ll. Khar. in larger hand. $9\frac{3}{8}'' \times 2\frac{3}{4}''$. Pl. XXXIX.

L.A. vi. ii. 0235. Strip of fine silk, plain, undyed, showing two ll. Khar., incomplete, on one side. $4'' \times \frac{5}{8}''$. Pl. XXXIX.

L.A. vi. ii. 0236. Fr. of paper MS., much torn; showing remains of six ll. Khar., faint, in straggling hand, on one side. $6\frac{3}{4}'' \times 2''$.

L.A. vi. ii. 001. a. Rim of lacquered wooden vessel, fr. of; outside black, inside dark red with $\frac{3}{4}''$ band of black round top; edge rounded. H. $1\frac{1}{2}''$, length $\frac{7}{8}''$, thickness $\frac{13}{16}''$.

L.A. vi. ii. 001. b. Pottery fr. from body of vessel. Hand-made, of well-levigated hard light grey clay, evenly fired; orn. with band of incised wave-pattern, above which is series of shallow incised lines. $1\frac{3}{4}'' \times 2\frac{1}{2}'' \times \frac{1}{4}''$. Pl. XXXVI.

L.A. vi. ii. 002. Pottery fr., wheel-made, reddish-drab clay with buff slip, kiln-fired. Handle set horizontally, orn. outside with series of vertical scorings, and pierced

vertically with round hole for cord. $2\frac{1}{8}'' \times 2\frac{3}{8}'' \times c. \frac{1}{4}''$ to $\frac{5}{8}''$. Pl. XXXVI.

L.A. vi. ii. 003. Paste bead, grooved all round to make one large ball flanked by two small; brick-red. Length $\frac{5}{8}''$, diam. $\frac{5}{16}''$ to $\frac{1}{2}''$.

L.A. vi. ii. 004. Pottery fr., hand-made, of well-levigated black clay, hard and evenly fired; decoration, incised parallel straight lines rather irregular. Gr. M. $2\frac{7}{8}''$, thickness $\frac{3}{16}''$. Pl. XXXVI.

L.A. vi. ii. 005. Fr. of bronze slag. Gr. M. $1\frac{3}{4}''$.

L.A. vi. ii. 006. Fr. of neck of bronze vessel (?). Rim thickened and cut like teeth of saw; neck perpendicular but low; broken from shoulder. H. $1''$, length $2''$, orig. diam. of neck $3\frac{1}{2}''$.

L.A. vi. ii. 007. Bronze bar, sq. in section, slightly curved, with anchor fluke at one end, and at the other a claw to fit round a rod. On top, orn. of notches and incised diagonals. Condition good. Length $2\frac{1}{16}''$, width $\frac{3}{16}''$. Pl. XXXVI.

L.A. vi. ii. 008. Fr. of iron ring from harness; section sq., condition bad. Diam. $1\frac{1}{2}''$.

L.A. vi. ii. 009. Bronze rivet with triangular head like L.A. iii. 003; condition fair. Length $1''$.

L.A. vi. ii. 0010. Bronze strap-loop of bent wire, diamond in section, prob. from light harness; figure-of-eight shape with open middle and flat end for sewing into strap. $1\frac{3}{8}'' \times \frac{3}{4}''$, diam. of wire $\frac{1}{8}''$. Pl. XXXVI.

L.A. vi. ii. 0011. Oval bronze strap-ring from harness, inside rounded, outside bevelled, sq. recess for strap $\frac{1}{16}'' \times \frac{3}{8}''$ in inner rim; condition good. Diam. $\frac{7}{8}'' \times \frac{11}{16}''$, thickness $c. \frac{1}{8}''$. Pl. XXIX.

L.A. vi. ii. 0012. Fr. of open-work moulded bronze strip. Floral orn., condition fair, perhaps orn. from belt. $\frac{7}{8}'' \times \frac{3}{4}'' \times \frac{1}{32}''$. Pl. XXIX.

L.A. vi. ii. 0013–0014. Two wooden combs with arched tops; 0013 is fr. only, 0014 in good condition. *0013*, H. (incomplete) $1\frac{5}{8}''$, two teeth to $\frac{1}{8}''$. *0014*, H. $2''$, width $1\frac{7}{8}''$, length of teeth $1''$, four teeth to $\frac{1}{8}''$.

L.A. vi. ii. 0015. Soapstone disc, round except on one side, where two flat surfaces make a point; pierced in centre; cf. L.A. viii–ix. 002. Diam. $1\frac{1}{8}''$, diam. of hole $\frac{3}{16}''$, thickness $\frac{3}{16}''$.

L.A. vi. ii. 0016. Wooden handle, tip-cat-shaped, roughly rounded and tapering at each end. In centre deep groove, rudely bevelled, for attachment of rope. Length $4\frac{3}{4}''$, diam. $1''$, groove $\frac{3}{16}'' \times c. \frac{1}{2}''$. Pl. XXXV.

L.A. vi. ii. 0017–0018. Two wooden spoons, straight; handle roughly sq. in section, spreads into thin flat rounded bowl; rudely cut. *0017*, length $8''$, handle $\frac{3}{8}''$ sq., bowl $\frac{1}{8}''$ thick, $1\frac{3}{8}''$ broad. *0018*, length $9''$, handle $\frac{7}{16}'' \times \frac{5}{16}''$ section, bowl $\frac{1}{8}''$ thick, $1\frac{1}{2}''$ broad. 0017, Pl. XXXV.

L.A. vi. ii. 0019. Wooden seal-case, oblong, with edges rounded except on top. Three string-grooves, and hole pierced through bottom of seal cav. One side of cav. broken away. Condition good. $2'' \times 1\frac{7}{16}'' \times \frac{7}{8}''$.

L.A. vi. ii. 0020. Wooden seal-case, as preceding, but with two string-grooves only, and cut down on one side and across ends. Hole pierced horizontally through centre. $1\frac{3}{8}''$ sq. $\times 1''$.

L.A. vi. ii. 0021. Roughly rounded wooden stick, with knob at each end; one end tapers before knob; handle for attachment. Length $5\frac{1}{2}''$, diam. $\frac{7}{16}''$ to $\frac{1}{4}''$. Pl. XXXV.

L.A. vi. ii. 0022. Wooden stick, carefully rounded but not turned. At one end rude point; at other for $2\frac{1}{2}''$ thinned down but not finished off, clearly for insertion in hollow holder of some kind. $\frac{11}{16}''$ from unfinished part is black line painted all round. Wooden pen (?). Length $7\frac{5}{8}''$, finished part $5''$, diam. of finished part $\frac{3}{8}''$, of unfinished $\frac{1}{4}''$ to $\frac{1}{8}''$.

L.A. vi. ii. 0023. Fr. of wooden tool (?), with button end similar to that of L.A. i. iv. 009. Length $2\frac{3}{4}''$, diam. $\frac{1}{4}''$. Pl. XXXV.

L.A. vi. ii. 0024. Pottery disc chipped from vessel of dark grey clay, hand-made, well-levigated; fired on an open hearth and mat-marked; cf. L.A. 002. Diam. $1\frac{1}{4}''$, thickness $\frac{3}{16}''$.

L.A. vi. ii. 0025. String sandal (L.). Sole formed of thick string plaited, the plait being then coiled flat and bound together by a string passing transversely through sole. This string is prob. turned at edge and brought back, but sole is so compacted with wear that it is impossible to see clearly. Round edge of sole is series of short strings. Each is doubled and then twisted cable-wise, leaving loop at top. The ends are passed down into edge of sole and there finished off, but no knots apparent.

These strings, set close together and standing an average height of $1\frac{5}{8}''$, form sides of shoe. They are not continuous all round, but are set in groups of four or five where most required: i. e. on outer edge, there are three groups on side of heel and foot and remains of another outside little toe; on inner edge, two groups on inside of heel, one at instep (the strings here are $3''$–$3\frac{1}{2}''$ long to cover joint of toes), and one at side of great toe At point of sole is another group of three, strengthened with binding of string. Through loops at top of all these another thick string was passed, crossing on front of foot, by which the whole was drawn tight and shoe fastened firmly. A loose string, hanging to group at point of sole, prob. also strengthened fastening. Under heel and toe-part of sole are patches of hide sewn with thong. Length $10\frac{1}{4}''$, gr. width $3\frac{7}{8}''$. Pl. XXXVII.

L.A. vi. ii. 0026. Leather shoe-sole (L.) and part of vamp; heel missing. Sole double, vamp stitched to it with fine string; worn; patch over little toe; dried fruit inside. $7\frac{1}{8}'' \times 4\frac{1}{8}''$.

L.A. vi. ii. 0027. Fabric frs.; coarse yellowish woollen material, in texture and appearance similar to L.A. iv. 003, and small fr. of fine dark red woollen (?) stuff. Yellow fabric $1' 6'' \times 10''$; red $2''$ sq.

L.A. vi. ii. 0028. Fr. of silk fabric, brownish yellow, finely corded, with bit of rough stick to which short edge was evidently attached. Seam running lengthwise through silk. A banner (?). Silk *c.* 1′ 5½″ × 6″; stick (broken) 2 9/16″.

L.A. vi. ii. 0029. Fr. of leather, thin, tanned. Gr. M. 4⅛″.

L.A. vi. ii. 0030. a–b. Two leather shoes. (*a*) R. shoe complete. Upper made in two pieces, one forming the toe-piece, the other the heel-piece. Towards instep and middle of outside edge of foot where these uppers meet, their top edges are cut down towards sole, leaving wide V-shaped gap. Marks of stitches along top edges, for a binding. Broken. Sole of single thickness. 9⅞″ × 3″ (broken). (*b*) Sole of L. sandal. From hole between first and second toes come two thongs, secured by knot below. Holes for similar thongs by edge half-way down each side and on each side of heel. Single thickness of leather. 10″ × 4⅛″.

L.A. vi. ii. 0031. Fr. of leather shoe; heel-part of sole with sinew stitching round edges; coloured purple underneath. 3¾″ × 3¼″.

L.A. vi. ii. 0032. Shoe-sole of woven string, part of; very close firm texture and much solidified by earth. 6¼″ × 3⅛″.

L.A. vi. ii. 0033. a–b. Frs. of grass and leather rope. (*a*) Of twisted grass, doubled on itself and knotted at intervals of *c.* 1″; ends broken. Length *c.* 2′ 4″. (*b*) Of twisted thongs; one thong doubled upon itself to give two strands, another (tied to the bend with sinew) giving the third; second sinew binding at other end. Length, three strands 7″.

L.A. vi. ii. 0034. Hemp-string (?) net, broken; for netting game; meshes *c.* 2″ sq.

L.A. vi. ii. 0035. Fabric frs., ragged, including one piece of fine brick-red woollen material, loose texture, with strip of similar yellow stuff sewn to it; two frs. of coarser buff material, hemp, even texture; and two scraps of fine buff silk, brittle. All plain weave. [Analysed by Dr. Hanausek.] Gr. length 1′ 3″.

L.A. vi. ii. 0036. Fabric frs., chiefly buff hemp and silk materials, with scraps of dark blue silk and brown felt, and piece of string and fine red woollen thread. Texture of one piece of buff silk extremely fine. Ragged, plain weave. [Analysed by Dr. Hanausek.] Gr. length of fabric 8″.

L.A. vi. ii. 0037. Fr. of felt, light yellow, much eaten away. Gr. M. 7″.

L.A. vi. ii. 0038. Two bands of coarse woollen fabric, yellow; one single, edges oversewn; the other folded to give four layers thickness, much frayed. [Analysed by Dr. Hanausek.] Gr. length 9½″.

L.A. vi. ii. 0039. White stone bead, sausage-shaped, pierced lengthways; rudely cut. 1⅝″ × 11/16″.

L.A. vi. ii. 0040. Miniature wooden spatula, with flat pointed blade. 2¾″ × 3/16″ to 7/16″. Pl. XXXV.

L.A. vi. ii. 0041. Goose feather, drab-coloured. Length 4″.

L.A. vi. ii. 0042. Fr. of felt, chocolate brown, with remains of woollen fabric sewn on face with dark blue wool. Woollen fabric has buff warp and red weft. Much worn. Gr. M. 3″.

L.A. vi. ii. 0043. Two frs. of horsehair gauze, both warp and woof 'wrapped-twined', and piece of dull purple silk twisted into cord. For gauze see also L.A. vi. ii. 0060. Gauze, gr. m. 2½″, length of cord 1′ 1″. Pl. XXXVII.

L.A. vi. ii. 0044. Dried florets, stamens, etc. of saffron (?), tied up in small piece of coarse woollen cloth.

L.A. vi. ii. 0045. a–b. Fabric frs. (*a*) Fine striped woollen *darri*, woven in satin twill, in bands of colour in following order:—deep red, dark green, yellow-green, bright yellow, saffron, violet; warp pale blue twisted yarn. 1⅞″ × 1 7/16″. (*b*) Very fine figured silk, with eccentric meandering lines of white, bearing occasional leaf-and-flower-like spots in green, blue, and yellow on rich red ground; warp crimson; weave a fine satin twill. 1⅛″ × 1¾″. Pl. CXI.

L.A. vi. ii. 0046. Fr. of coarse woollen pile-carpet. Warp of thin brown string; weft, four picks of loosely twisted yarn, well packed; pile, a soft woollen yarn, four-ply, *c.* 1″ long, turned twice round each 'end' of warp forming a very firm knot. The length of pile is sometimes more than the ½″. There are about four rows to the inch (vertical), and about eight knots to the inch (transverse): = thirty-two to one inch sq. On back, at intervals of five picks of weft, are rows of long woollen tufts. Each tuft consists of two soft woollen yarns very slightly twisted and *c.* 5″ in length, slipped under every tenth 'end' of warp, no knot being tied and the two ends of tuft floating free. The object of these may have been to prevent the carpet's slipping on a smooth floor.

The colours used are black, dull white, red, pink, buff, yellow, bright blue. A fine green occurs, but may be caused by damp and heat affecting the blue accidentally. The ground colour is red and pink, with indistinguishable pattern in lines, sometimes straight and sometimes meandering, of the other colours. The order of the colours in a band which seems to be part of the border is:—red and pink, white, buff, blue, black, red. The technique closely resembles that of the modern cheap Japanese rug. The tufts at back are now absent, and the pile knot is more simple and not so strong. The quality of wool (or fibre) is also inferior in the modern rug. Well preserved; colours bright; wool very brittle. 8½″ × 9½″. Pl. XXXVII.

L.A. vi. ii. 0050. a–g. Seven wooden writing-slips, blank, (*a*) and (*b*) complete, rest broken. Condition good except (*f*) rotten. Gr. length (complete) 9⅞″.

L.A. VI. ii. 0051. Rectang. wooden label; blank; on each edge notch to hold string; good condition. $4\frac{3}{8}'' \times 1\frac{5}{16}''$.

L.A. VI. ii. 0052. Wooden spatula, with flat narrow blade; good condition. $6\frac{7}{8}'' \times \frac{9}{16}''$ to $\frac{3}{8}''$. Length of blade $3\frac{1}{2}''$.

L.A. VI. ii. 0053. Wooden stick, sq. in section with rounded ends. Chop-stick (?). Good condition. $8\frac{3}{8}'' \times \frac{1}{4}''$.

L.A. VI. ii. 0054. Wooden writing-slip, lower end. *Obv.* one char. Chinese at top. *Rev.* blank. Good condition. $3\frac{1}{8}'' \times \frac{1}{2}''$.

L.A. VI. ii. 0056. Wooden writing-slip, part of. *Obv.* six chars. Chin., indistinct. *Rev.* blank; surface perished. Fair condition. $4\frac{1}{2}'' \times \frac{1}{2}''$.

L.A. VI. ii. 0057. Wooden spatula rudely cut from Chin. wooden document, and showing remains of Chin. (illegible) on back of bowl. $5'' \times 1\frac{1}{2}''$ to $\frac{1}{2}'' \times \frac{1}{8}''$.

L.A. VI. ii. 0058. Wooden spoon; bowl slightly hollowed; rough; part of bowl split off. Length $7\frac{1}{8}''$, bowl $\frac{5}{8}'' \times 2\frac{1}{4}''$.

L.A. VI. ii. 0059. Fr. of paper MS., dirty and much torn; showing on obv. parts of three ll. Chin. and on rev. three ll. Khar. (see Chavannes, *Documents chinois*, p. 189, no. 918 and Pl. XXVIII). $5'' \times 3''$.

L.A. VI. ii. 0060. Frs. of horsehair gauze or sieve, open texture; 'wrapped-twined' weave; with edging of yellow felt and two circular pieces of the same attached to centre. Thick strip of felt also connecting edge and centre. Felt is applied on both sides. Gauze broken, and mended with brown hair string. Cf. for gauze L.A. VI. ii. 0043; also for edging N. XII. 0018 (Pl. XXVIII). Gr. M. $9\frac{5}{8}'' \times 6\frac{1}{2}''$.

OBJECTS EXCAVATED AT, OR FOUND NEAR, RUINS L.A. VII, VIII, IX

L.A. VII. 002. a–e. Misc. lead and bronze frs. (*a–c*) Three pierced lead discs; loom-weights (?). Diam. $\frac{5}{8}''$. (*d*) One bossed hollow nail-head, bronze. Diam. $\frac{3}{4}''$. (*e*) Fr. of ear-ring; part of orn. in green paste on bronze wire suspended from spring ring. Diam. $\frac{1}{2}''$. Pl. XXIX.

L.A. VII. i. 1. Oblong tablet, rudely cut. *Obv.* surface insect-eaten; blank. *Rev.* two columns Khar. (seven and two ll.), very faint. Hard but split. $8\frac{1}{4}'' \times 5'' \times \frac{3}{4}''$.

L.A. VIII. 001. Wooden comb with arched top as L.A. VI. ii. 0014; good condition. H. $2''$, width $\frac{1}{4}''$, length of teeth $\frac{3}{4}''$, two teeth to $\frac{3}{16}''$.

L.A. VIII. 002. Lug of wooden bowl, lacquered, as L.A. III. 004. Lug outside black, inside dark red over black. Hole pierced for rivet (?) through side of bowl just below lug. Condition good. $2\frac{3}{4}'' \times \frac{1}{2}'' \times \frac{3}{8}''$.

L.A. VIII. 003. Misc. silk, wool, and leather frs., including pieces of yellow felt, fine lambskin (?), buff silk, fine corded plum-coloured silk, and bit of fringe or tassel of whitish-yellow silk, frayed out from piece-silk. Gr. M. $7''$.

L.A. VIII. 004. a–c. Misc. lead and bronze frs. (*a*) Leaden disc, pierced; loom-weight? Diam. $\frac{1}{2}''$. (*b*) Three links (one broken) of bronze wire chain. Length $1\frac{1}{2}''$. (*c*) Bronze buckle, iron tongue broken. $\frac{3}{4}''$.

L.A. VIII–IX. 001. Lignite seal, lentoid, pierced horizontally. *Obv.* shows head facing L., wearing elaborate head-dress. *Rev.* animal facing L. Very rough work. $1'' \times \frac{13}{16}'' \times \frac{1}{4}''$. Pl. XXIX.

L.A. VIII–IX. 002. Soapstone disc, slate colour, irregular, with circular perforation not central, sand-worn. Cf. L.A. VI. ii. 0015. Diam. $1\frac{1}{4}''$. Pl. XXXVI.

L.A. VIII–IX. 003. Lump of bronze slag. Gr. M. $1\frac{1}{2}''$.

L.A. VIII–IX. 004. Bronze plaque, oblong, with central rivet-hole. At one end two tags bent over and broken, prob. to take a hinge; other end wedge-shaped. Prob. for attachment as L.A. 0052. $1\frac{1}{4}'' \times \frac{3}{4}'' \times \frac{1}{2}''$.

L.A. VIII–IX. 005. Bronze arrowhead; see L.A. 0069. Point sharp. Length $1\frac{1}{8}''$, with rect. haft $1\frac{3}{16}''$. Pl. XXIX.

L.A. VIII–IX. 006. Bronze plaque of ivy-leaf shape, with tongue once bent round and riveted to centre of plaque; cf. L.A. 0052. $\frac{7}{8}'' \times \frac{3}{4}'' \times \frac{1}{32}''$. Pl. XXIX.

L.A. VIII–IX. 007. Narrow pointed bronze tongue, with hole at blunt end; through this passes strip of bronze, the ends of which are bent round and riveted together. Perhaps of metal fringe on leather harness or armour; cf. N. XIV. 009. $1\frac{3}{8}'' \times \frac{3}{16}'' \times \frac{1}{16}''$. Strip *c.* $\frac{1}{2}'' \times \frac{1}{8}''$. Pl. XXIX.

L.A. VIII–IX. 008. Iron arrow-head with long tang; head triangular in section, flanges much perished. Length $3\frac{5}{16}''$, length of tang $1\frac{1}{2}''$. Pl. XXIX.

L.A. VIII–IX. 009. Fr. of blown-glass vessel, yellowish-white, translucent. On outside, part of wheel-ground hollow ellipse. Gr. M. $1''$, thickness $\frac{1}{8}''$.

L.A. VIII–IX. 0010. Cone of yellow stone with point cut off. $\frac{7}{8}'' \times \frac{9}{16}''$ to $\frac{5}{16}''$.

L.A. VIII–IX. 0011. Fr. of glass, translucent, yellow, with one smooth and rounded edge, others broken. $\frac{3}{4}'' \times \frac{3}{8}'' \times \frac{1}{8}''$.

L.A. VIII–IX. 0012. Fr. of crystal, jagged, yellowish; as L.A. 0063. Gr. M. $\frac{13}{16}''$.

L.A. VIII–IX. 0013–0014. Two frs. from blown-glass vessel, yellowish-white, translucent. Outside wheel-ground in pattern of hollowed lozenges. Gr. M. $1\frac{1}{2}''$, thickness $\frac{1}{8}''$.

L.A. viii–ix. 0015. Fr. of bronze plate with cast relief orn. of Chin. character. Broken; use uncertain. $\frac{5}{8}'' \times \frac{1}{2}'' \times \frac{1}{16}''$. Pl. XXIX.

L.A. viii–ix. 0016. Bronze stiletto (?) of thin wire, one end pointed, the other curving into ring but broken off. Length $2\frac{7}{8}''$, diam. $\frac{1}{16}''$. Pl. XXIX.

L.A. viii–ix. 0017. Red agate bead, part of; spheroid. Diam. *c.* $\frac{1}{2}''$.

L.A. viii–ix. 0018. Glass bead, ribbed bugle, dark green, translucent. $\frac{3}{8}'' \times \frac{3}{16}''$.

L.A. viii–ix. 0019. Fr. of glass bead, greenish-white, translucent spheroid. Diam. *c.* $\frac{3}{4}''$.

L.A. viii–ix. 0020. Fr. of yellow cornelian; part of bead (?) $\frac{7}{16}'' \times \frac{5}{16}'' \times \frac{1}{4}''$.

L.A. viii–ix. 0021. White stone charm (?); one side concave; in other flat side are cut four circular depressions; pierced with two $\frac{1}{16}''$ holes from long edge to long edge. $\frac{1}{2}'' \times \frac{3}{8}'' \times \frac{1}{8}''$.

L.A. viii–ix. 0022. Three frs. of silk fabric, red, peach, and blue; very fine texture, ragged and brittle; red and blue of corded weave, peach plain. Gr. M. $5''$.

L.A. viii–ix. 0023. Pendant of green paste, roughly shaped as snake (?). Gr. M. $\frac{3}{8}''$.

L.A. viii–ix. 0024. Glass bead, rude three-sided bugle, translucent brown. $\frac{3}{8}'' \times \frac{3}{16}''$.

L.A. viii–ix. 0025. White quartzite pebble. Diam. $\frac{1}{2}''$.

L.A. ix. i. 1. Oblong tablet, rudely cut. *Obv.* seven columns Khar. (each with seven ll.), very faint; surface perishing. *Rev.* ten columns Khar., faint. Wood hard but split. $1'\ 3\frac{1}{2}'' \times 4\frac{1}{4}'' \times \frac{1}{2}''$. Pl. XXXVIII.

MISCELLANEOUS OBJECTS FOUND AT LOU-LAN SITE L.B.

L.B. 001 and 003. (2 miles N. of.) **Two frs. of blown-glass dish,** translucent yellow; raised ridge beneath; this and broken edges sand-corroded. Gr. M. $1\frac{5}{8}''$, thickness $\frac{1}{16}''$ to $\frac{1}{8}''$. 001, Pl. XXXVI.

L.B. 002. (2 miles N. of.) **Fr. of blown-glass vessel,** translucent yellowish-white; appliqué pattern of glass thread in parallel bands. Type assigned by A. Kisa (*Das Glas im Altertume*) to 3rd century A.D. Gr. M. $1\frac{3}{16}''$, thickness $\frac{1}{16}''$.

L.B. 004. (2 miles N. of.) **Bronze strap-loop,** wedge-shaped; cf. L.A. vi. ii. 0010; condition good. Length $1\frac{1}{2}''$, length of base $\frac{9}{16}''$, diam. of bronze $\frac{1}{8}''$. Pl. XXXVI.

L.B. 005. (2 miles N. of.) **Fr. of hollow bronze boss,** conical, but with point cut off. H. *c.* $\frac{3}{8}''$, orig. diam. *c.* $1''$. Pl. XXIX.

L.B. 006. (2 miles N. of.) **Bronze arrow-head;** heavy stem, socketed for shaft; three barbs, thick and hardly differentiated from stem by shallow grooves, so that section is practically a triangle with rounded corners; cf. C. 123. 001. Length $2''$. Pl. XXXVI.

L.B. 007. (2 miles N. of.) **Jasper flake,** dark grey, one flat face, the other irregularly ribbed, sand-worn. Length $1\frac{1}{2}''$.

L.B. 008. (2 miles N. of.) **Piece of bronze wire** bent almost into a ring. Diam. of ring $\frac{5}{8}'' \times \frac{1}{2}''$, of wire $\frac{1}{16}''$.

L.B. 009. (2 miles N. of.) **Bronze relief orn.** with tongue behind for attachment; floral design (?); condition good. $1\frac{1}{16}'' \times \frac{3}{4}''$. Pl. XXIX.

L.B. 0010. Wooden stick, roughly rounded at one end, shaved flat at the other, and cut to point. A pen (?). Length $3\frac{3}{4}''$, width $\frac{3}{8}''$, thickness $\frac{3}{8}''$ to $\frac{1}{16}''$.

***L.B. 0011. Wooden stick,** tapering suddenly to one end, gradually to the other. Through the latter a small hole is pierced. Prob. a carpet-weaver's needle. For others see:—N. xxiv. viii. 007–8 and 0010; xvi. i. 001; xxxviii. i. 001; M.I. vii. 005; viii. 008–10; L.B. iv. i. 006; iv. v. 0019; M.Tagh. a. 009, and Ka. i. 004. Length $11''$, diam. $\frac{3}{8}''$ to $\frac{3}{16}''$.

L.B. 0012. Wooden pen (?). Rough stick with the bark on, split down centre and pointed. Length $7''$, diam. $\frac{3}{8}''$.

L.B. 0013. Wooden beam (found at L.B. ii) with relief carving on one side. Between plain borders two continuous palm (?) branches interlace, and in oval spaces so formed are eight-petalled rosettes. Triangles at sides much defaced, but traces of half-rosettes. In one side, $1'\ 7''$ from end, a mortice $5\frac{1}{4}'' \times 1\frac{1}{2}'' \times 1\frac{1}{4}''$. Condition fair. Cf. Strzygowski, *Kopt. Kunst*, p. 66, Fig. 86. $3'\ 11'' \times 6\frac{3}{4}'' \times 2\frac{1}{2}''$. Pl. XXXI.

L.B. 0014. Fr. of carved wooden capital, *c.* one quarter; found at L.B. ii. Plan of top, an octofoil within the limits of a square. The foils occupying the corners of the square are sharply pointed; those coinciding with the diameters, square-ended. Plan of necking, circular.

From a simple chamfered astragal spring two whorls of sharply serrated acanthus leaves. The lower, of four leaves meeting at their bases, rise half the height of capital and have their tops abruptly curved over on the line of its diagonal section, and so designed as to occupy fully the sq. section of the block. The second whorl has its leaves alternating with the first, and rising from between the rapidly diverging edges of these to top of capital. These also have the tips sharply recurved and hanging down, occupying the centres of sides of sq. contour. From behind them spring R. and L., upward and outward, curving volutes, meeting and curving downwards in pairs, at the upper angles of block; a row of diminishing seeds following the lower edge of horn of volute.

General type of capital, Indo-Corinthian. The leaves have no 'eyes', and are channelled with V-shaped grooves from mid-rib to points of serration. The economy of cutting, and retention of orig. surfaces of cubical block, show characteristics reappearing in Byzantine carving. The octofoil upper plan and circular lower plan are found again in Byzantine capitals of Santa Sophia, Constantinople, and St. Mark's, Venice. Diam. at top 9", at base 7". H. $7\frac{1}{4}$". Pl. XXXII.

L.B. 0015. (From Stūpa.) **Fr. of large blown-glass vessel,** yellowish-white, translucent; outside orn. with hollow-ground circles. Gr. M. 2", thickness $\frac{3}{8}$".

L.B. 0018. Part of open-work wooden panel. Pattern an open trellis-work of diagonal bars, with large wheels about each point of junction. These touch each other along the diagonals, but not perpendicularly or horizontally, where they are connected by vertical crosses. No relief carving. Rabbet at top and bottom. Condition good. 1' $7\frac{1}{2}$" × $6\frac{1}{2}$" × $1\frac{1}{8}$". Pl. XXXIII.

L.B. 0019. a–b. Two frs. of open-work wooden panel (joining), found at L.B. vi. Pattern of wheels about junction points of diagonal lattice-work as in L.B. 0018; but on smaller scale and without vertical crosses. Condition fair. See L.B. ii. 0024. 2' $2\frac{1}{2}$" × 11" (joined) × $\frac{3}{4}$". Pl. XXXIII.

L.B. 0020. Fr. of open-work wooden panel, carved from one piece; pattern as L.B. 0018; rotten and much split. $8\frac{1}{2}$" × 7" × $1\frac{1}{2}$".

OBJECTS EXCAVATED IN RUINS L.B. i–iii

L.B. i–iii. 001. Bronze ring, plain, made of flat strip. Diam. $\frac{11}{16}$", width $\frac{1}{4}$".

L.B. i–iii. 002. Fr. of bronze mirror, like L.A. 0029; condition good. Gr. M. $1\frac{1}{8}$", thickness $\frac{1}{8}$" to $\frac{1}{32}$". Pl. XXIX.

L.B. i–iii. 003. Bronze arrow-head; cf. L.A. 0069. In each face a triangular depression; sharp point; remains of iron tang. Condition good, but broken. Length $2\frac{3}{16}$".

L.B. i–iii. 004. Part of bronze buckle (?), rectang., with oblong slit for strap or attachment; condition good. Length (incomplete) 1", width 1".

L.B. i–iii. 005. Silver ring with hollow bezel to take circular stone. Diam. 1", width $\frac{1}{2}$" to $\frac{1}{8}$". Pl. XXIX.

L.B. i–iii. 006. Bronze strip bent into ring; cf. L.A. 0046; condition bad. Diam. $\frac{3}{8}$", width $\frac{1}{8}$".

L.B. i–iii. 007. Bar of mica. $1\frac{7}{8}$" × $\frac{1}{2}$" × $\frac{3}{16}$".

L.B. i–iii. 008. Steatite spinning-whorl; conical, but without point. H. $\frac{7}{16}$", diam. $\frac{3}{4}$".

L.B. ii. 4. Stick of white stucco, broken; one side flattened. From E. slope. $2\frac{1}{2}$" × $\frac{3}{8}$".

L.B. ii. 6. Stucco relief fr. Semicircular convex plaque applied to curved bar. In centre of plaque is circular jewel boss with ring round it. Round this is row of small flames curving clockwise, and with the hollows between them filled by beads. Outside again is row of smaller ringed bosses alternating with hearts arranged blunt end to centre. Most of this orn. (applied) is missing. White stucco. Prob. part of head-dress of large stucco fig. Diam. *c.* 4".

L.B. ii. 7. Stucco relief fr. of flame border, large scale. White stucco, burned. $6\frac{1}{4}$" × $3\frac{3}{8}$".

L.B. ii. 001. a–b. Two frs. of mica. Gr. fr. $2\frac{1}{8}$" × $\frac{1}{8}$".

L.B. ii. 002. Tapering wooden pin, sq. in section, with large ball at the thicker end; one piece of wood throughout, ball not turned. Prob. pin used for fastening timber frame-work and adapted for architectural decoration. See L.B. iv. i. 2 and iv. iv. 001–2. Staff 9" × $\frac{7}{8}$" to $\frac{3}{8}$" sq., diam. of ball $2\frac{3}{4}$" × 3". Pl. XXXV.

L.B. ii. 004. Carved wooden bud, triple, elongated; hole in one (slightly concave) side to take plaster; possibly from edge of wooden vesica. $4\frac{1}{2}$" × $1\frac{1}{2}$" × 1". Pl. XXXIV.

L.B. ii. 005. Part of open-work wooden panel, carved in relief, showing end of leaf or lotus petal; prob. as L.B. ii. 0016 when complete; much split. 7" × $3\frac{1}{2}$" × $1\frac{1}{4}$". Pl. XXXII.

L.B. ii. 006. Part of curved wooden lotus-wreath, carved in round; petals grouped in bands as in stucco wreath Kha. ii. 002, alternate groups facing different ways; roughly carved, condition fair. Diam. $6\frac{1}{2}$", thickness $1\frac{1}{2}$".

L.B. ii. 007. Part of wooden beam or panel, carved in relief. One end broken, the other cut slanting; at this end plain border, and along squared side $\frac{1}{2}$" border; other side bevelled. Within, leaves and tendrils, good free work. Rotten condition. 5" × 9" × $1\frac{1}{4}$". Pl. XXXII.

L.B. ii. 008. Apex of carved wooden finial (?); flat, with edges cut in form of three superimposed 'umbrellas' surmounted by a disc. $1\frac{1}{2}$" × $\frac{1}{2}$" × $\frac{3}{16}$".

L.B. ii. 009. Finial to wooden model of Stūpa (?), consisting of fourteen 'umbrellas' strung on a spike, and head on plan of two upright discs intersecting each other at right angles; the whole cut from one piece of wood; remains of gilding on head; hole at bottom for attachment. H. $3\frac{7}{8}$", diam. at bottom $\frac{7}{8}$". Pl. XXXV (reversed).

***L.B. ii. 0010. Upright of wooden balustrade,** lathe-turned, with five ball mouldings divided by pairs of sharp-edged rings, and neck of thistle-head shape. Lowest ball moulding sometimes cut short to fit. Ends cut off sq. with round tenon projecting from each. Good condition. Of same pattern: L.B. ii. 0031 and 0038–0045

(belonging to rails L.B. II. 0046–0051); cf. L.B. V. 008. *0010*, length 1′ $7\frac{3}{4}$″, diam. 3″, tenons 1″ and $1\frac{1}{4}$″. *0010, 0039, 0040, 0044*, Pl. XXXIII.

L.B. II. 0011–0013. Three frs. of open-work wooden panel, carved in relief; prob. belonging to each other, though not joining. Represent grotesque beast standing L. with long body humped almost in circle and head looking back to R. Of this only horn and ear are traceable (0011). Two goat-like hind-legs are shown in 0012; fore-legs indistinct. Remains of plain border and tenon above (0011) and below (0012), and border down L. side (0011). Cf. L.B. II. 0053. Much bleached and split. *0011*, 1′ 11″ × 6″ × 1″; *0012*, 1′ 6″ × $5\frac{1}{2}$″ × 1″; *0013*, $6\frac{3}{4}$″ × $\frac{3}{4}$″ × $\frac{3}{4}$″. *0011* (reproduced upside down) and *0012*, Pl. XXXIII.

L.B. II. 0014. a–b. Wooden block carved in relief, broken in two pieces which join. Larger part occupied by a square, within which is carved a circular lotus or rosette of eight petals and eight sepals; remainder sunk and plain. In centre of rosette are three holes in line, all containing wooden pins, none piercing through to back; clearly to affix corolla separately made. Perhaps part of a lintel; cf. M. V. 0012, Pl. XLVII. Surface worn. 1′ 3″ × $10\frac{1}{2}$″ × $3\frac{1}{2}$″ to 2″. Pl. XXXII.

L.B. II. 0015. a–d. Four wooden beams, carved in relief on one side; (*a*), (*b*), and (*d*) cut in two for transport, (*c*) cut off diagonally in antiquity. (*a*) and (*b*) with others similar perhaps formed part of wall decoration, of which (*a*) was outer edge on one side, (*b*) on the other.

Across one end of each is border formed of plain bands crossed diagonally between two plain sq. mouldings, with half-rosettes in the triangles so formed. Down beam runs series of hanging circles, linked vertically by straight bands and interlacing with smaller circles at sides. Each large circle contains a plain eight-petalled and eight-sepalled lotus or rosette; and in spandrels outside are smaller eight-petalled rosettes halved. The pattern is bounded on L. side in (*a*), on R. side in (*b*), by plain border, complete in (*b*) to $2\frac{1}{2}$″ width, but incomplete ($\frac{1}{2}$″ width) in (*a*). On inner sides it is cut through; and in these, towards either end, is oblong mortice, showing that additional woodwork (doubtless completing the pattern) was fixed to beams on these sides. On outer (L.) side of (*a*), where incomplete border occurs, mortices are also found. Condition good.

(*c*) and (*d*) show same pattern, but on slightly larger scale, and less well preserved. Side border on L. in (*c*), on R. in (*d*), and pattern cut through on other side. (*a*) 6′ 11″ × $8\frac{3}{8}$″ × $2\frac{1}{4}$″; (*b*) 7′ × $7\frac{3}{4}$″ × $2\frac{1}{2}$″; (*c*) 3′ 5″ × 10″ × 2″; (*d*) 7′ × 9″ × $2\frac{1}{4}$″. Pl. XXXI.

L.B. II. 0016–0017. Open-work wooden panel, carved in relief; in two halves almost complete. Within plain border (prob. sq.) is four-petalled lotus with sepals showing between; petals and sepals notched and veined with curving central rib; petal tips elongated to fill corners. Beyond border above and below is rabbet to fit into adjoining piece. See also L.B. II. 0030; V. 009. 1′ 9″ × 9″ and $8\frac{1}{2}$″ (*0017*) × $1\frac{5}{8}$″. Pl. XXXI.

L.B. II. 0018. Fabric frs., including piece of coarse cotton material, light buff, sand-encrusted, loose plain weave; another slightly finer; and minute scrap of dark red silk. [Analysed by Dr. Hanausek.] Gr. M. 6″.

L.B. II. 0019. Bundle of buff cotton frs. of coarse texture, with small frs. of yellow felt and red silk; also piece of coarse brown woollen fabric similar to L.A. IV. 003, but much worn and sand-encrusted. [Analysed by Dr. Hanausek.] Gr. M. 9″.

L.B. II. 0020. Fr. of coarse cotton stucco-backing; fabric similar to L.B. II. 0018; hard and sand-encrusted. Gr. M. 7″.

L.B. II. 0021. Fr. of open-work wooden panel, carved in relief; prob. similar kind of design to L.B. II. 0011–0013. On L. side, plain border with rabbet; then head and outstretched neck of grotesque animal, with open mouth, formidable teeth, short pointed ears, and apparently short twisted horns. These are laid back against neck, only shown by incision, and have perhaps lost tips. Condition bad. 1′ $\frac{1}{4}$″ × $3\frac{1}{2}$ × $1\frac{1}{2}$″. Pl. XXXIV.

L.B. II. 0022. Part of wooden frame for panel (?). Orn. with lozenge pattern formed by cutting diagonal grooves. On rev. remains of mortice and dowel hole. $10\frac{3}{4}$″ × $2\frac{1}{4}$″ × $2\frac{1}{8}$″. Pl. XXXIII.

L.B. II. 0023. Corner of open-work wooden panel. Pattern apparently a diagonal lattice-work with wheels as L.B. 0019, but of more solid construction. Below is portion of rabbet. Wood bored in various directions, apparently by insects. $11\frac{3}{4}$″ × $2\frac{1}{4}$″ × $1\frac{1}{2}$″.

L.B. II. 0024. Corner of open-work wooden panel, carved in slight relief on one side. One edge with narrow border and another with rabbet, intact; others broken. Pattern, a wide lattice-work of diagonal bars with wheels about points of junction as L.B. 0019; but here diagonals pass alternately over and under circumference of wheel, as indicated by shallow relief carving; cf. L.B. IV. i. 001. Wood bleached and split. 1′ $4\frac{1}{4}$″ (with rabbet 1′ $5\frac{1}{2}$″) × $6\frac{1}{2}$″ × $1\frac{1}{4}$″.

L.B. II. 0025–0026. Two wooden beams, carved in relief on one side. Between plain borders two plain ribbons interlace angularly, forming lozenges. These are filled by open four-petalled rosettes with sq. button at centre. Side triangles filled by similar half-rosettes. Both ends of 0025 and one of 0026 cut slanting; 0025 much worm-eaten, but with good surface; 0026 without worm-holes, but surface less good. Both beams cut in two and thinned behind for transport. *0025*, 6′ $4\frac{1}{2}$″ (complete) × $5\frac{1}{4}$″ × 2″ (orig. $4\frac{3}{4}$″); *0026*, 7′ 1″ (complete) × $5\frac{3}{4}$″ × $1\frac{7}{8}$″ (orig. 5″). Pl. XXXI.

L.B. II. 0027. Wooden beam, carved in relief on one side with upper parts of human figs. apparently under arcades;

remains of eight (Buddha?) figs., the pillar bases coming at about level of their elbows. Too much damaged to show any detail. 3′ 9″ × 5″ × 2″ to 2¾″. Pl. XXXII.

L.B. II. 0028. Part of open-work wooden panel, with 1¼″ rabbet at each end; heavy trellis-work with sq. holes set diamond-wise; see L.B. V. 0012. 1′ 10″ × 1′ ¼″ × 1¼″. Pl. XXXIII.

L.B. II. 0029. Part of wooden panel, with rounded end; cut short slantwise at other end and broken on L. Round end, inside border, filled by lozenge pattern cut by grooves and finished off by deep groove where sides become straight. Straight part divided lengthways by four extant deep grooves, which are crossed by shallow slashes diagonally from R. 1′ 6″ × 6″ × 1½″. Pl. XXXI.

L.B. II. 0030. Half of open-work wooden panel, carved with lotus in relief, as L.B. II. 0016–0017. Warped, bleached, and split. 2′ × 8¾″ × 1 3/16″. Pl. XXXII.

L.B. II. 0032. Part of wooden beam, carved in relief on one side; much sand-worn and decayed; design of two running animals facing central fig., very indistinct. 2′ 8½″ × 3¾″ × 2″.

L.B. II. 0033–0034. Two finials in wood representing Stūpas, made after same pattern, but not a pair. At bottom is rectang. base, then drum with sides slightly concave separated by ring moulding from dome; then small rectang. member spreading out to top, which is cut flat, and spire above with five 'umbrellas' and ball top in 0033, seven 'umbrellas' in 0034. Sq. mortice in base for attachment. Condition fair, but wood much split. *0033*, H. 1′ 8½″, base 4½″ sq.; *0034*, H. 2′ 5¾″, base 5½″ × 4″. Pl. XXXII.

L.B. II. 0035. a–b. Two parts of wooden beam, carved in relief on one side. In centre, between plain raised mouldings, lozenge pattern; outside the plain mouldings, along each edge, a moulding of 2″ billets divided by ½″ cubes and marked off by a groove on each side. 2′ 8½″ and 3′ × 3″ × 2½″. (*a*) Pl. XXXI.

L.B. II. 0036–0037. Two wooden beams, carved in relief on one side. 0037 (complete) has ends mitred. Pattern, a floral scroll between plain mouldings. Starting from centre, where they interlace, two stems run one each way to ends of beam. From each spring three triple leaves filling the hollows, two below and one above in each case. At centre on either side of interlacement is small six-petalled rosette, and in angle at each end another. Below is rounded moulding carved with lozenge pattern, and beneath a plain sunk moulding. Excellent condition. 0036 differs only in that floral scroll is continuous, and that there are no rosettes. Only one end originally cut sq. Surface somewhat cracked and broken away. Both thinned behind for transport. See L.B. V. 0013. *0036*, 5′ 5¼″ × 7½″ × 2½″ (orig. 4½″); *0037*, 5′ 7½″ × 7½″ × 2″ (orig. 5″). Pl. XXXI.

For similar floral scroll, with added rosettes, cf. Strzygowski, *Kopt. Kunst*, p. 37, Fig. 44; also Fig. 76.

L.B. II. 0038–0045. Eight uprights of wooden balustrade; see *L.B. II. 0010. *0039*, *0040*, *0044*, Pl. XXXIII.

L.B. II. 0046–0051. Six rails of wooden balustrade; for uprights see L.B. II. 0038–0045. Sq. in section; upper surface plain, two plain mouldings on outer side. Under-surface divided by pairs of rounded transverse mouldings into four sq. sections, in each of which is mortice for head of upright. Good condition. 2′ 1″ × 3″ to 2¾″ sq. *0047*, *0048*, *0051*, Pl. XXXIII.

L.B. II. 0052. R. arm of wooden fig., in round or high relief. To elbow split off body, but forearm free. Sq. at shoulder with two ½″ dowels to fasten it. Loose sleeve with fringe at elbow, forearm bare except for bangle on wrist; hand clenched, too much worn to show fingers. Rude work; wood bleached and split. Length 1′ 1½″, knuckles to elbow 6½″, thickness 1″ to 1½″. Pl. XXXIV.

L.B. II. 0053. Fr. of open-work wooden panel, carved in relief with grotesque beast as L.B. II. 0011–0013; but wood too much decayed and split to show detail. Head, however, visible with muzzle like bull-dog's, prominent eye, and small curved horn. Tenon below. 1′ 11″ × 8½″ × 1½″. Pl. XXXIII.

L.B. II. 0054. Whisk-broom, made of grass on same principle as T. XIII. iii. 001 (q.v.), but preserved to greater length. Stick core in handle end. Length 1′ 1″. Pl. LII.

L.B. III. 1. a–h. Four-legged wooden cupboard, oblong, carved in relief. Parts extant: (*a*) L. front leg, (*b*) strip off L. side of R. front leg (upper half), (*c*) L. back leg, (*d*) R. back leg, (*e*) upper strip of front panel, (*f*) middle strip of front panel, (*g*) lower strip of L. panel, (*h*) upper strip of L. panel. The four legs are alike; in section, oblong, though lower half, shaped roughly like beast's leg, has angles bevelled off. Paws are in profile on wider sides both of chest and legs, facing spectator on narrower sides. Above legs three sunk grooves (on outer sides only) produce effect of architrave. In upper half of legs are two mortices (one on each inner face) to take side panels. (*a*), (*c*), and (*d*) have three dowel holes (¼″ diam.) to each mortice; five dowels extant in (*a*), three in (*c*), and one in (*d*); (*b*) shows four dowel holes. Mortice on narrow face extends 1″ lower than mortice on wide face (1′ 2½″ and 1′ 1½″ respectively); and on wide face is second mortice (*c.* 1¼″ × ¾″) with upper edge level with bottom of mortice on narrow face. This took cross-piece to support bottom of chest. Upper parts of legs (*c*) and (*d*) are plain, but wide faces of (*a*) and (*b*) are carved in low relief with two upright rows of sq. four-petalled rosettes within plain sq. lattice-work, seven to row (cf. for similar decoration the incised ivory panels in Strzygowski, *Kopt. Kunst*, Pl. XI, XII, XIII). Ends of panels (*c.* 1¼″ thick) are rabbeted to leave tenon ¾″ thick. Side panels (*g–h*) are plain. Front panel (*e–f*) carved in shallow relief with rows of four-petalled rosettes of irregular sizes.

Here, 3″ from L. side and $2\frac{1}{2}$″ from top, is upper part of door aperture, $8\frac{1}{4}$″ wide. Top, bottom, back, R. side, and most of R. front leg missing. Dowel holes in upper panel edges for attachment of lid. Cupboard (reconstructed) 2′ $10\frac{1}{4}$″ × 2′ $1\frac{1}{4}$″ × 1′ 4″, h. of legs 1′ 8″, total h. 3′. Pl. XLVII.

L.B. III. 001. Fr. of mica. 1″ × $\frac{3}{4}$″.

L.B. III. 002. Pottery fr., hand-made, of coarse clay 'smothered' black; traces of incised orn., prob. part of palmette design from under handle. $1\frac{15}{16}$″ × $1\frac{5}{8}$″ × c. $\frac{3}{16}$″.

L.B. III. 003. Fr. of almond (?) shell. Length $\frac{15}{16}$″.

L.B. III. 004. Fabric frs., including buff woollen (?) material, felt, and much-decayed silk rags, of usual textures; also frs. of flat string band, consisting of four pieces of thick string laid side by side (two dark brown at edges and two light in middle), and bound together by cross threads of dark brown; cf. N. XXIX. 001. Also part of felt shoe-sole (?) with seam down centre, and remains of one side of shoe and toe-piece sewed round edge. String band c. 8″ × 1″; shoe-sole, length $9\frac{3}{8}$″, breadth 3″ to 2″.

L.B. III. 007. a–c. Misc. bronze and paste frs. (*a*) Bronze arrow-head, triangular in section, point blunted as L.A. 0069. Length 1″. (*b*) Part of bronze needle (?), point and eye broken. Length 3″. (*c*) Fr. of *millefiori* glass bead, chequer pattern, red, white, black, blue, and yellow. Diam. c. $\frac{1}{2}$″. (*c*) Pl. XXIX.

OBJECTS EXCAVATED IN RUINS L.B. IV, V

L.B. IV. 001. Fr. of rim of large jar; sq.-edged rim turns sharply out at right angles to axial line of vessel. Much distorted. Hand-made, very finely potted, of fairly well levigated red clay fired very hard on an open hearth and blackened by 'smothering'. $5\frac{7}{8}$″ × $3\frac{1}{16}$″ × $\frac{1}{4}$″. Pl. XXXVI.

L.B. IV. 002. End of hollow bronze bar; end solid, rounded, and orn. with two raised rings; condition poor. Length 1″, diam. $\frac{5}{16}$″.

L.B. IV. 003. Bronze fr., prob. rim of vessel; thickened towards edge by two bands; condition fair. Length $3\frac{1}{8}$″, thickness $\frac{1}{16}$″ to $\frac{1}{8}$″.

L.B. IV. 004. Fr. of carved wood, oblong, flat on both sides, front surface curved in to overhanging top (?) moulding, back broken off. Two dowel holes pierced through sideways, beneath moulding, and another below from front to back. Signs of open-work (?). $2\frac{1}{2}$″ × $\frac{3}{4}$″ × $\frac{5}{8}$″.

L.B. IV. 005. Wooden bird-arrow, with head complete; other end broken. $2\frac{3}{4}$″ from broken end shaft swells into rounded knob, which is cut down sq. again after $\frac{5}{16}$″ to $\frac{1}{4}$″ diam., the shaft thence continuing for $1\frac{7}{16}$″ to take head. This is of peg-top shape, made in two pieces, and pierced vertically to fit on shaft: (1) the cylindrical body, narrowing to join exactly on to knob of shaft, which thus strengthens its base, (2) the rounded top, at apex of which end of shaft appears. Pieces carefully cut to fit; strips of fibre round shaft; see L.B. IV. ii. 005; V. 006.

According to Mr. T. A. Joyce, to whom the correct explanation of the object is due, such arrows were used for killing birds without spoiling the feathers by blood, and are found in India (Orissa), N. America, etc.; see specimens in the Ethnographical Galleries, British Museum. Length of whole $4\frac{1}{2}$″, of head $1\frac{1}{2}$″, diam. of shaft $\frac{5}{16}$″, gr. diam. of head $1\frac{1}{8}$″. Pl. XXXV.

L.B. IV. 006. Heads of bearded wheat and Tārigh (millet).

L.B. IV. 007. Fr. of slate hone-stone, with perforation at end, one face worn smooth. Found 26. xii. 06. Length $1\frac{1}{2}$″.

L.B. IV. 0010. Small flexible wooden stick, with mallet head tapering towards one end; prob. used to sound small bell, or some instrument composed of thin keys of wood or metal resembling modern xylophone. Cp. App. *H.* Stick $6\frac{1}{2}$″ × $\frac{1}{8}$″ diam., head $2\frac{3}{16}$″ × $\frac{1}{2}$″ to $\frac{1}{4}$″ diam.

L.B. IV. 0011. Part of bronze ear-ring, orn. with second twist of wire. Diam. of ring $\frac{5}{8}$″, of wire $\frac{1}{16}$″.

L.B. IV. i. 2. Tapering wooden pin with knob, like L.B. II. 002; IV. iv. 001–002, but knob here shaped like inverted thistle-head; cf. L.B. IV. V. 0010. Lathe-turned and orig. painted red; condition fair. Staff $9\frac{1}{2}$″ × c. $\frac{7}{8}$″ sq.; knob H. $2\frac{5}{8}$″, diam. of base $2\frac{1}{4}$″.

L.B. IV. i. 6. Rectang. under-tablet. *Obv.* seven ll. Khar., black and clear. *Rev.* one l. Khar., faded. Well preserved; one corner ant-eaten. $7\frac{3}{8}$″ × $3\frac{3}{8}$″ × $\frac{3}{16}$″. Pl. XXXVIII.

L.B. IV. i. 7. Rectang. cov.-tablet, with empty seal cav. ($1\frac{1}{8}$″ × $\frac{7}{8}$″). *Obv.* on one side of cav. two ll. Khar. in very small clear hand; nearer to seal two separate ll. Khar. *Rev.* six ll. Khar. clear and black. Hard and excellently preserved. $5\frac{5}{8}$″ × $2\frac{7}{8}$″ × $\frac{5}{8}$″ (max.). Pl. XXXVIII.

***L.B. IV. i. 001. Part of open-work wooden panel.** Above is border, $2\frac{7}{8}$″ deep, divided horizontally into three bands by slanting grooves as in L.B. IV. V. 0030; viii. 001. Below is part of wheel pattern, the wheels strung on interlacing vertical and horizontal bands which cross each other in centre and pass alternately over and under circumference of wheel. This interlacing is worked also on rev., but border on rev. is plain. Into it from one end runs dowel hole, $\frac{1}{2}$″ in diam. Condition good. For pieces of same pattern and scale see L.B. IV. i. 002; vii. 001, 004; and cf. L.B. II. 0024. H. $8\frac{3}{4}$″, diam. of wheel $3\frac{1}{2}$″ to $3\frac{5}{8}$″, thickness $\frac{13}{16}$″ to $\frac{9}{16}$″. Pl. XXXIV.

L.B. IV. i. 002. Fr. of open-work wooden panel, of same wheel pattern as L.B. IV. i. 001. On one side carved similarly to interlace; on other flush, but both wheel and bands roughly bordered with black paint much faded, to show alternate interlacing. Dowels to pin this to adjoining piece on one side, $2\frac{5}{8}''$ long, $\frac{1}{8}''$ thick; on other, two smaller put in cross-wise, $\frac{3}{32}''$ thick. Good condition. Diam. of wheel $4''$, thickness $\frac{5}{8}''$. Pl. XXXIV.

L.B. IV. i. 003. Flat horn spoon with curved handle, cut out of straight piece and warped. Length $7\frac{7}{8}''$, bowl $1\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{1}{8}''$. Pl. XXXV.

L.B. IV. i. 004. Wooden stick, smoothly rounded, one end cut on a bevel, the other chipped to short point. At this end a flat cut has been made up centre of stick for $1\frac{3}{8}''$ and wood on one side cut away. Length $10\frac{5}{8}''$, diam. $\frac{3}{8}''$.

L.B. IV. i. 005. Fr. of open-work wooden panel, carved in relief on one side, and belonging to L.B. IV. vii. 003; viii. 001. Shows curved branch, with rib stem and pointed leaves on either side, met by end of similar branch whereon are three berries. Remains of third branch at other end. Good condition. Length $8''$, thickness $\frac{7}{8}''$. Pl. XXXIV.

L.B. IV. i. 006. Wooden stick, cut round very carefully but not turned; tapers quickly to one end (broken), gradually to other; prob. carpet-weaver's needle; see L.B. 0011. Length $7\frac{7}{8}''$, diam. $\frac{3}{8}''$ to $\frac{3}{16}''$. Pl. XXXV.

L.B. IV. i. 007. Straight-edged piece of wood, slightly concave and convex laterally; ends blunt wedges; $\frac{1}{4}''$ from each end a notch ($\frac{1}{4}'' \times \frac{1}{8}''$) is cut into each side. $6\frac{3}{4}'' \times \frac{7}{8}'' \times \frac{1}{8}''$. Pl. XXXV.

L.B. IV. ii. 1. Wedge cov.-tablet, with empty seal-cav. ($1\frac{1}{2}'' \times 1\frac{1}{4}''$). *Obv.* near sq. end one l. Khar., pointed end slight traces Khar. *Rev.* very faint traces of Khar. Well preserved. $9\frac{3}{4}'' \times 1\frac{1}{2}'' \times \frac{3}{4}''$ (max.).

L.B. IV. ii. 001. Fr. of iron knife; plain round solid handle, and blade curving slightly back; much rusted. Length $5\frac{1}{2}''$, of handle *c.* $3\frac{1}{2}''$, diam. of handle $\frac{9}{16}''$, width of blade $\frac{15}{16}''$, thickness of blade $\frac{1}{8}''$. Pl. XXXVI.

L.B. IV. ii. 002. Wooden tablet, almost sq., with raised border $\frac{1}{16}''$ high, $\frac{1}{2}''$ wide top and bottom, and $\frac{1}{4}''$ at sides. Behind, in middle of each side, a cut on a bevel is taken out of the squared edge, *c.* $\frac{1}{4}''$ wide. One edge broken. Resembles Roman waxed tablet. $3\frac{5}{8}'' \times 3'' \times \frac{1}{4}''$.

L.B. IV. ii. 003. Lump of white quartz ground in rhomboid form. $2\frac{3}{16}'' \times 1\frac{3}{16}'' \times 1\frac{1}{8}''$.

L.B. IV. ii. 004. Flat piece of wood cut in rude crescent, and thinning slightly to rounded ends. Through centre is drilled hole, larger on concave than on convex side of crescent. Edges rounded and much worn on top. Remains of black paint on concave and on each flat side. Prob. handle of drill. $2\frac{3}{4}'' \times 1\frac{3}{8}'' \times \frac{5}{8}''$ to $\frac{1}{2}''$.

L.B. IV. ii. 005. Shaft of wooden bird-arrow, cut in one piece. For length of $8''$ plain, then swelling into rounded knob, which is cut down sq. again after $1''$ to orig. diam. Beyond this, shaft projects another $1\frac{3}{4}''$ to take arrow-head. See L.B. IV. 005. Length $10\frac{3}{4}''$, diam. $\frac{3}{8}''$ to $\frac{7}{8}''$.

L.B. IV. ii. 006. Horn knife-handle, in section a flat oval; ends cut sq. Towards thick end, on front edge a row of six holes, three pierced to the hollow, two begun, and one half pierced. $5\frac{3}{8}'' \times \frac{7}{8}''$ to $\frac{11}{16}'' \times \frac{1}{2}''$ to $\frac{5}{16}''$. Pl. XXXV.

L.B. IV. ii. 007. Horn spoon; slender handle, bowl almost flat; much decayed. Length $8''$, bowl $2\frac{1}{4}'' \times 1\frac{1}{4}'' \times$ *c.* $\frac{1}{16}''$.

L.B. IV. ii. 008. Goat's-hair (?) rope 'chitan' for hobbling horse. Rope is of four strands. It was then twisted double so as to leave a loop at one end (see *Ancient Khotan*, i. p. 348, b), while the other is attached to a cross-piece of wood, tip-cat-shaped as L.A. VI. ii. 0016. Length of rope $2'\ 6''$, diam. *c.* $1''$, length of cross-piece $2\frac{1}{4}''$.

L.B. IV. ii. 009. Wooden 'chŭluk' for fastening lambs' collars, as L.A. I. iv. 009. Cross-piece worn and notched as if for strings, and piece of rope $\frac{3}{16}''$ in diam. tied round notch at end of straight piece. Cross-piece $2'' \times \frac{1}{2}''$, straight piece $3\frac{1}{4}'' \times \frac{3}{8}''$. Pl. XXXV.

L.B. IV. ii. 0010–0012. Three wooden seal-cases, as L.A. VI. ii. 0024, etc.; 0010 with hole pierced through bottom; notched for three strings; good condition. *0012* (largest), $1\frac{7}{8}'' \times 1\frac{7}{16}'' \times \frac{7}{8}''$.

L.B. IV. ii. 0013. Fr. of woollen carpet in blue and red. The construction resembles that of the ordinary Indian *darri*. The warp is a tightly twisted hemp string, and the weave 'satin'. The colours do not run right across the fabric, but are inwoven with each other at their junctions, where they are cut off. The new feature in this specimen is the addition of tufts at the back in rows about fifteen picks apart, and interlocking with each other laterally, each tuft being held in by two loops of the warp, three 'ends' apart, thus bridging the intermediate three 'ends'; while each of the engaging 'ends' holds the contiguous extremities of two tufts. The tufts are of four strands *c.* $1''$ in length when tied; allowing $\frac{3}{4}''$ for the knotting, they would be pieces $2\frac{3}{4}''$ in length. Care is taken not to engage the same warp thread more than once in each four rows of tufts, and thereby all the warp threads are taken up equally and the fabric is not distorted. The use of these tufts has been suggested under L.A. VI. ii. 0046.

Fr. of pattern preserved exhibits a red edge $\frac{1}{2}''$ broad, within which is stepped battlement pattern in blue on a red ground. Colours and fabric well preserved. $6'' \times 3''$. Pl. XXXVII.

L.B. IV. ii. 0014. Fr. of woollen weft, from which the warp, prob. hemp, has perished. The weave is 'wrapped-twined', fine and even. Traces of band of chevron pattern in buff, blue, and crimson. Prob. part of shoe upper. $1'\ 4'' \times 1\frac{1}{2}''$.

L.B. iv. ii. 0015. Wooden bar, semicircular in section; ends sq., and near them broad shallow rounded grooves cut to take straps, or perhaps a bow-grip. $4\frac{11}{16}'' \times 1\frac{5}{16}'' \times \frac{9}{16}''$. Pl. XXXV.

L.B. iv. ii. 0016. Woven slipper (L.). Sole of coarsely woven string, over which a shaped patch of leather is stitched to make the heel. Lined throughout with very coarse canvas, of string-like texture, woven to shape, in one piece, with gussets on R. side of heel and over little toe. The uppers are covered with a figured polychrome fabric, woven to shape in one piece without gusset or seam. At the top this is carefully turned over on to the canvas lining, and at the bottom it is sewn on to the string sole. A rough unshaped toe-cap of leather has been stitched over the front of the shoe. The coloured fabric of the uppers has a somewhat coarse close-cut hempen warp with—round back, sides, and lower part of toe—a weft of buff and white wool, silk weave, in a pattern of flattened continuous S-curves thickened at the bends and with flattened dots between them. To make the toe-caps the warp threads are gathered to a common centre.

Between the narrowed continuation of the all-round pattern and that of the top edging, a crescent-shaped piece was woven in, consisting at its full width of five zones, viz. from the inner side of the crescent: (1) red band whereon is white rectilinear modification of wave pattern; in lower intervals oval dots, in upper conventional plant patterns; (2) starting as narrow blue band with red border, develops through two eyes in red, black, and white into yellow band, in centre of which is blue quatrefoil; (3) plain white band; in front, lower edge relieved by broken band of five blue threads; (4) red band whereon are close-set yellow lozenges; (5) white band whereon in buff is straight horizontal stem with pairs of triangular leaves. Well preserved; colours very bright. Length $9\frac{1}{2}''$. Pl. XXXVII.

L.B. iv. ii–v. 001. Straight ivory rod; round, broken both ends, at one badly worn. Length $3''$, diam. $\frac{3}{16}''$. Pl. XXXVI.

L.B. iv. ii–v. 002. Bundle of felt frs., yellow, white, and grey; somewhat eaten away. Gr. M. $10\frac{1}{4}''$.

L.B. iv. ii–v. 003. Fabric frs., ragged, including usual buff silk, much decayed, in dark and lighter shades, brick-red woollen fabric of open texture, and buff woollen (?) gauze, very brittle. Gr. M. $10''$.

L.B. iv. ii–v. 004. Bundle of leather frs., including heel-part of shoe-sole with patch sewed on beneath; scrap of leather and another of felt; scrap of hide with hair still adhering in part; and sole-shaped piece of leather (broken and inside cut out), coloured dark grey on each side, with thong passed through hole $3''$ from end. Broken 'sole' *c.* $6'' \times 2\frac{1}{2}''$.

L.B. iv. ii–v. 005. Bronze nail-head, hollow circular with flat rim. Diam. $\frac{9}{16}''$. Pl. XXIX.

L.B. iv. ii–v. 006. Pottery fr., dark grey, hand-made, of well-levigated clay, hard and evenly fired, with 'mat-marking' on outer surface; see L.A. 002. $2\frac{3}{4}'' \times 2\frac{1}{4}'' \times \frac{1}{4}''$. Pl. XXXVI.

L.B. iv. iii. 001. Rounded wooden peg, tapering to point, cut sq. at other end. From this end projects another smaller peg that tapers to a point sq. in section, and is wrapped round with thin strips of wool. Perhaps a bobbin. Long peg $4\frac{1}{4}'' \times \frac{5}{8}''$ (gr. diam.), short peg $1\frac{1}{4}'' \times \frac{5}{16}''$ (gr. diam.). Pl. XXXV.

L.B. iv. iii. 002. Fr. of carved wood, perhaps foot of piece of furniture, such as cupboard. At end, tenon with three dowel-holes. In section oblong, in profile like a rude attempt at a leg and hoof. Has a knot-hole that held scanty remains of clay (?) plugging. H. $2\frac{1}{2}''$ (with tenon $3''$).

L.B. iv. iii. 003. Tārīgh (millet) **grains.**

L.B. iv. iv. 001–002. Two wooden pins with knobs like L.B. ii. 002; iv. i. 2, but knobs here conical with flattened points and lathe-turned. Pins roughly sq. in section, and end of 001 has been fixed in stucco; used for architectural decoration. Wood rather split. *001*, staff $9\frac{3}{4}'' \times 1\frac{1}{4}''$ sq., cone H. $4''$, diam. of base $3\frac{1}{4}''$; *002*, staff $10'' \times 1''$ sq., cone H. $4''$, diam. of base $2\frac{3}{4}''$. Pl. XXXV.

L.B. iv. iv. 003. Small wooden cupboard (?) leg, lathe-turned. Two-fifths of way up and at top are pairs of mortices at right angles to each other, to take tenons of panels or cross-pieces. Dowels or dowel-holes remain in these, and in lower mortices frs. also of tenon. Mouldings: ring foot, plain cylinder with fillet above and below, two ball mouldings divided by ring fillet, and remainder (with mortices) plain cylinder. Round this near top and bottom, over dowel-holes, is sunk shallow groove, $3''$ wide, perhaps for orn. metal bands to cover dowel-heads (?). Condition fair. Cf. N. xiv. iii. 0037. H. $1'\ 5\frac{1}{2}''$, gr. diam. *c.* $2''$. Pl. XXXIII.

L.B. iv. iv. 004. Fr. of paper MS., small; showing part of two ll. Khar., large, faint, upon one side. $1\frac{1}{2}'' \times 1\frac{1}{8}''$.

L.B. iv. v. 1. Wedge cov.-tablet, with empty seal cav. ($1\frac{1}{2}''$ sq.). *Obv.* on each side of cav. trace of one l. Khar. *Rev.* blank. Surface poor. $8\frac{5}{8}'' \times 2\frac{1}{16}'' \times \frac{5}{8}''$ (max.).

L.B. iv. v. 3. Oblong tablet, with notch at centre of each side to take string. *Obv.* faint traces of one l. Khar. *Rev.* one l. Khar. indistinct. Hard but discoloured. $4'' \times 2\frac{1}{8}'' \times \frac{3}{16}''$.

L.B. iv. v. 001. Fr. of carved wood, from angle of capital (?). Traces of leaf orn. Rotten and much split, broken off behind. H. $8''$, thickness $2''$ to $\frac{7}{8}''$.

L.B. iv. v. 002. Fr. of carved wood, flat strip, with raised plain border, $\frac{5}{16}''$ wide, along two-thirds of one edge. Carved with narrow serrated leaves in low relief, which come up to edge of fr. on the one-third of side beyond border, showing that carving continued beyond limit of

border at this part. Perhaps from side of cupboard opening, the raised border making its frame on one side. 8" × $1\frac{1}{8}$" × $\frac{7}{16}$" to $\frac{3}{16}$". Pl. XXXIV.

L.B. IV. v. 003. Ivory rod, broken both ends, roughly rounded and tapering; cf. L.B. IV. ii–v. 001. Length $3\frac{1}{8}$", diam. $\frac{1}{4}$" to $\frac{3}{16}$". Pl. XXXVI.

L.B. IV. v. 004. Fr. of carved wood, perhaps upright from piece of furniture. Both sides apparently finished though not true. On one side fr. of cross-piece in same piece of wood. One end sq., other broken and charred, with remains of dowel-hole parallel to cross-piece. Back plain. In front, two rows of chess-board pattern, alternate squares sunk $\frac{1}{16}$". 4" × *c.* $\frac{7}{8}$" × $\frac{5}{8}$". Pl. XXXIV.

L.B. IV. v. 005. Wooden needle, flat and oblong in section towards eye, rounded towards point; a notch cut in blunt end; eye, a round hole $\frac{1}{8}$" in diam. $9\frac{1}{8}$" × $\frac{3}{8}$" × $\frac{1}{4}$".

L.B. IV. v. 006. Wooden shaft of bird-arrow, showing attachment of wooden head (broken). At one end rounded notch cut for string, and shaft slit down sides for insertion of feathers. Splices of horn remain in slits, but feathers gone. Marks of tight binding. Towards other end shaft is cut to a long V-point and spliced into another length of wood; prob. end of head, but cf. L.B. IV. 005. Fastened prob. with gum, as no signs appear of binding. Length $7\frac{1}{2}$", diam. $\frac{3}{16}$" to $\frac{1}{2}$".

L.B. IV. v. 007. Half of wooden knife-sheath, flat on inner side but bevelled on outer to half octagon. Inner side hollowed out, the hollow ending in a rough point towards one end. At this end, sheath is finished off sq.; other end partly cut, partly broken. 7" × $\frac{7}{8}$" × $\frac{9}{16}$".

L.B. IV. v. 008. Fr. of lacquered wood, two sides and one corner squared, others broken. Two small bolt-holes on short side, one near same corner on long. Running into long side parallel to short side a dowel. Wood on each side overlaid with cloth woven of fibre, over which lacquer is applied. Much destroyed; on one side black, on the other red. Cf. L.B. IV. v. 002. $10\frac{1}{4}$" × $2\frac{1}{4}$" × $\frac{3}{8}$".

L.B. IV. v. 009. Fr. of lacquered wood, straight, sq. or oblong in section, but back split away. At one end tenon, at other traces of hole, $\frac{3}{16}$" in diam., pierced from front to back. Three finished sides lacquered black. 10" × $\frac{5}{8}$" × *c.* $\frac{3}{8}$".

L.B. IV. v. 0010. Fr. of wooden knob, lathe-turned, shaped like thistle-head, orig. painted red; counterpart to knob of L.B. IV. i. 2. H. 3".

L.B. IV. v. 0011. Bundle of white felt cuttings; narrow strips tied together. Gr. length *c.* 7", gr. width $\frac{7}{8}$".

L.B. IV. v. 0012. Part of wooden panel or bar, carved in relief. Design, an undulating stem broken by a joint at each turn; a line of nail-head orn. running along its centre throughout. Each joint throws out three long lily-like leaves which palmette-like lie one beside the other in receding planes in hollow of stem. On convex side a single small leaf is thrown out. Work vigorous and well designed, style very Hellenistic. Ground sunk, leaving sq. moulding at one edge. Both edges finished, both ends broken. At one end is part of mortice transverse through thickness, $\frac{9}{16}$" wide, and in the back (surface split off) are marks of two dowel-holes for securing tenon. At same end but on other edge is part of mortice through the width. On broken edge mark of transverse dowel-hole. 1' 2" × $3\frac{3}{16}$" × $1\frac{5}{16}$". Pl. XXXIV.

L.B. IV. v. 0013. (S.E. corner.) **Wooden upright** from piece of furniture, probably chair, carved in form of grotesque beast standing with large head sunk on breast, and lacquered red, black, and yellow. Resembles in general shape N. xii. 3. (animal carving), *Ancient Khotan*, ii. Pl. LXX, and like it recalls Persepolitan design. Beast has rounded muzzle, crocodile jaws and teeth, small upright horns.

Detail of upper part behind not clear, but back flat with mortice near top to take rail ($\frac{15}{16}$" × $\frac{7}{16}$"), and small projection on top cut in hook form towards back, probably for securing cushion. Triangular opening also cut through sideways behind horns. Below, body and legs run into truncated mass, the lower part roughly leg-shaped and divided in two vertically; but hoof part solid and projecting backwards.

Lacquered red, except muzzle, sides of head, and space between horns, which are yellow with black and red markings to indicate mane or shaggy hair. Hoof also carved in circles, orn. with black and red spirals on yellow ground to show hair round claws, which are black. Inside of openings through head, and between legs, lacquered; but groove cut vertically between feet in front showing signs of attachment, and dowel in breast unlacquered broken off flush with surface. Upper part most carefully finished in front, lower behind. Fine work, somewhat decayed. Cf. L.B. IV. v. 0023. $9\frac{3}{4}$" × $1\frac{3}{4}$" × $1\frac{1}{8}$". Pl. XXXIV.

L.B. IV. v. 0014–0016. Frs. of three lacquered wooden hoops, one sq. in section, the others flat; flexible and covered with canvas under lacquer; prob. parts of rim (sq.) and side (flat) of tray or dish. Rim was applied separately, and has come apart. Lacquered: inside red over black; top of rim black with thin red line along each edge and red lozenges along centre; outside of rim black with red line. Diam. apparently *c.* 1'.

L.B. IV. v. 0017. Fr. of side of lacquered wooden bowl; black lacquer both sides rather decayed. Gr. M. $4\frac{3}{8}$", thickness $\frac{1}{8}$".

L.B. IV. v. 0018. Fr. of lacquered wood, strip from angle of sq. upright. Black lacquer with floral (?) design in red. Length $7\frac{1}{2}$", width $\frac{3}{8}$" (broken).

L.B. IV. v. 0019. Wooden stick, cut round very carefully and tapering quickly to one end (broken), slowly to the other. Through latter is small hole (barely $\frac{1}{16}$" diam.), and thickness has been shaved down on one side. Prob. carpet-weaver's needle; see L.B. 0011; IV. i. 006. Length $7\frac{1}{4}$", diam. $\frac{5}{16}$" to $\frac{1}{8}$".

L.B. IV. v. 0020–0021. Two wooden seal-cases as L.B. IV. ii. 0010, etc. Notches for three strings; 0021 with sq. hole in bottom. *0020*, $1\frac{15}{16}'' \times 1\frac{3}{8}'' \times 1\frac{1}{8}''$; *0021*, $1\frac{13}{16}'' \times 1'' \times \frac{13}{16}''$.

L.B. IV. v. 0022. Flat fr. of lacquered wood, prob. from bottom of bowl; broken at all edges; lacquer applied over canvas, black on one side, red the other; bad condition. Gr. M. $7''$, thickness $\frac{3}{8}''$.

L.B. IV. v. 0023. Wooden upright and rail from chair, carved and lacquered in form of fig. like L.B. IV. v. 0013, and identical in design with N. xii. 3 (*Ancient Khotan*, ii. Pl. LXX, human carving), but in much better condition. Upper part in form of human head of Persian (?) type, evidently intended for woman from circular contour lines on breast.

Below this, descent is made through half-open lotus blossom (out of which fig. rises) to solid horse leg and hoof. Head has large black eyes and eyebrows, black hair hanging in perpendicular locks to neck behind, and straight leaf and flower garland round brows. Above rises wooden projection, lacquered vermilion with black bevelled edges, cut in sort of hook towards back. Face lacquered grey with vermilion lips, vermilion spot on each cheek and ear, and similar stripe down forehead and chin. Long neck rises from yellow collar of red robe, and behind are small upright curled wings reminiscent of Greek sphinx wings though curled the reverse way, and lacquered yellow and black. The lotus has one brown petal and two yellow, and between show tips of vermilion inner petals. Horse leg is vermilion and hoof black.

Mortice in back of head still holds tenon of stout bar, lacquered black, which projects to back. Its other end is rounded, and has groove in which, on wooden peg, swings oblong flat piece of wood with rounded corners and hole for another pin at further end; this clearly served as hinge. Fine bold work, colours brilliantly preserved. Upright $1' \; 1\frac{1}{2}'' \times 1\frac{7}{8}'' \times 2\frac{1}{2}''$; bar $10'' \times 1\frac{3}{8}'' \times 1\frac{1}{4}''$. Pl. XXXIV.

L.B. IV. v. 0024. Fabric frs., including bundle of white felt strips ($2\frac{3}{4}''$ to $6\frac{1}{4}''$ long $\times \frac{1}{8}''$ to $2\frac{1}{4}''$ wide); frs. of usual buff cotton (?), silk, and felt; very thin strip of red silk, and fr. of dark blue wool.

L.B. IV. v. 0025. Leather fr. of irregular shape, which has been tied over top of circular object as cover is tied on jam-pot. Edges rough; hard; coloured inside grey to light red; dressed face down. Gr. M. $5\frac{3}{4}''$, diam. as tied $3\frac{1}{2}''$.

L.B. IV. v. 0026. Wooden half-baluster, lathe-turned, with tenons, to go against flat surface; complete with top and base ridge and ten ball rings; cf. L.B. v. 008; M. II. 009. Length $8''$ (with tenon frs. $8\frac{3}{4}''$), diam. $1\frac{1}{4}''$.

L.B. IV. v. 0027. Bar of lacquered wood, cross-piece from piece of furniture (?); oblong in section, with rounded tenons projecting $\frac{5}{8}''$ at each end. Near these at each end an iron dowel pierces the narrow sides. Its corrosion has split the wood. Lacquered black all over, with red scrolls on one flat and both narrow sides. $1' \; 9\frac{1}{4}'' \times 1\frac{1}{2}'' \times \frac{3}{4}''$.

L.B. IV. v. 0028. Wooden bowl hollowed out of block; nine lathe-turned grooves on outside, ridges between rather scarified; raised rim with shoulders to allow of fitting of lid; hard brown sediment at bottom; inside roughened by constant scraping out of contents, and worn away to depth of $2\frac{1}{2}''$. H. $3\frac{1}{2}''$, diam. $4\frac{3}{4}''$, thickness of sides $\frac{1}{2}''$.

L.B. IV. v. 0029. Fr. of base of lacquered wooden bowl like T. VI. b. ii. 001. Central portion flat, defined by groove inside, outer slightly rising. Lacquer on outside and flat portion of inside, black; on rising portion of inside, red. Bad condition. $3'' \times 1\frac{3}{4}'' \times \frac{1}{4}''$.

L.B. IV. v. 0030. Part of carved wooden pilaster or edge of panel, broken at lower end. Top, cut on L., broken on R., is divided into three planes horizontally by two grooves cut slanting back; see L.B. IV. i. 001, IV. viii. 001. Dowel-hole runs into it horizontally from broken end. Shaft carved with four hanging wreaths looped together by grooved cinctures. Plain narrow beading down sides. $1' \; 4\frac{1}{4}'' \times 2\frac{3}{4}''$ to $3\frac{5}{8}'' \times \frac{7}{8}''$. Pl. XXXIV.

L.B. IV. v. 0031. Base of bronze cup and part of hollow stem; broad outsplayed hollow foot; broken stem, rounded outside but sq. inside. H. of whole $2\frac{7}{8}''$, H. of stem $1\frac{5}{8}''$, diam. of base $3\frac{7}{8}''$. Pl. XXXVI.

L.B. IV. v. 0032. Five frs. of yellow felt, thin, painted with (apparently geometrical) patterns in dark grey, buff, and pale blue. Very fragile. Imitation of embroidery. Gr. fr. $4'' \times 3''$.

L.B. IV. v. 0033. Four frs. of yellow felt, painted with tempera in red, buff, brown, and grey. Conventional floral design of blue-petalled lotus on red ground; above, brown band with white spots. Largest fr. $2\frac{1}{2}'' \times 2\frac{1}{2}''$.

L.B. IV. v. 0034. Ivory die. Long rod sq. in section; the numbers (1–4 consecutively) marked by broad incised circles full width of side, with dot at centre. Good condition. $4\frac{1}{2}'' \times \frac{9}{16}''$ sq. Pl. XXXVI.

L.B. IV. vi. 1. Wedge under-tablet. *Obv.* four ll. Khar. faint and encrusted. *Rev.* one l. Khar. near sq. end, faint. Well preserved but encrusted. $8\frac{5}{8}'' \times 2'' \times \frac{1}{4}''$.

L.B. IV. vii. 001, 004. Two frs. of wheels from open-work wooden panels of same pattern and scale as L.B. IV. i. 001. Actual diam. $3\frac{3}{4}''$ and $3\frac{7}{8}''$.

L.B. IV. vii. 002. Weaver's wooden comb, smaller edition of N. XXII. i. 001; surface rough; edges cut sq. but sides bevelled towards them and also down to teeth. Cf. *Ancient Khotan*, ii. Pl. LXXIII, N. xx. 05. H. $4''$ (with handle $6''$), width $2\frac{3}{4}''$, length of teeth $\frac{3}{16}''$, six teeth to $1''$.

L.B. IV. vii. 003. Fr. of open-work wooden panel belonging to L.B. IV. i. 005; viii. 001. On top is end of berried laurel branch curving in reverse direction

to former; below, base of stem, and (between) solid transverse band with palmette leaves in relief, resembling but not identical with L.B. IV. V. 0012. Through band are two dowel-holes running from end to end; dowels broken.

The open-work is not finished off everywhere, and shows that a start was made by cutting a hole with a brace and bit. Good condition. 9" × 3" × 7/8". Pl. XXXIV.

L.B. IV. viii. 001. Fr. from edge of (open-work) wooden panel, belonging to L.B. IV. i. 005; vii. 003. Border, 3" deep, cut into three horizontal bands by slanting grooves as L.B. IV. i. 001; v. 0030. Through it transversely runs dowel-hole with dowel in position. Below is part of branch with leaves in relief similar to frs. quoted. Broken on R., other edges squared. 5¼" × 1¾" × 7/8". Pl. XXXIV.

L.B. IV. viii. 002. Fr. of carved wood from piece of furniture (?). Broken on two sides, squared on others. Raised border, *c.* ¼" sq., along one of these sides, and traces of smaller border (broken off) *c.* 1/8" wide on other. Between, curved band carved in scale pattern, three wide. Orn. suggests a long piece, but if so the grain is the wrong way. 2¾" × 2" × 7/8". Pl. XXXIV.

L.B. IV.-V. 002. a-b. Two bronze frs. (*a*) Ornamental rivet-plate, lozenge-shaped, with repoussé trefoil ends; in each, rivet for attachment; fair condition. Length 1¼". Pl. XXIX. (*b*) Part of pin with round convex head. Diam. ¾".

L.B. V. 001. Lead spinning-whorl; flat disc pierced as L.A. 0068, etc. Diam. 1 1/16", thickness 3/16".

L.B. V. 002. Bronze rivet-plate, plain oblong with slightly raised edges. Within these, top and bottom, two pin-holes for attachment, and two holes 5/16" sq. cut out in middle. Condition good. 1½" × 1¼" × 1/32". Pl. XXXVI.

L.B. V. 003. Fr. of sheet bronze, prob. rim of vessel. Gr. M. 1½", thickness 1/16".

L.B. V. 004. Lead wire, bent nearly to right angles. Length *c.* 2½", diam. 3/32".

L.B. V. 005. Bronze tongue, both ends pointed, bent over flat and pinned together; cf. L.A. 0052. Condition good. 1 5/16" × ¼" × 1/16".

L.B. V. 006. Fr. of bronze mirror; cf. L.A. 00113. Patterns in very low relief on back, geometric and vegetable, in sq. compartments, Chinese style. Gr. M. 1 7/8", thickness 1/16". Pl. XXIX.

L.B. V. 007. Small block of lignite, roughly cut. ½" sq. × ¼".

***L.B. V. 008. Upright of wooden balustrade,** lathe-turned, with seven ball mouldings divided by single rings, and plain neck; tenon at each end; good condition. Length 1' 5 5/8", diam. 2½", tenons ¾".

Of same pattern **L.B. V. 0010** (broken off at 1' 1¼" height), and 0014–0018 (fitting rail L.B. V. 0019); but latter have neck at each end. Cf. *L.B. II. 0010. L.B. V. 008, Pl. XXXIII.

L.B. V. 009. Part of open-work wooden panel, carved in relief with lotus as L.B. II. 0016–0017, but smaller. Wood much cracked. 1' 7½" × 6" × 1¼". Pl. XXXII.

L.B. V. 0012. Part of open-work wooden panel with rabbet at each end; heavy diamond trellis-work as L.B. II. 0028; surface split. 1' 9" × 6¼" × 1". Pl. XXXIII.

L.B. V. 0013. Wooden beam, carved in relief on one side with same running floral scroll as L.B. II. 0036; row of dog-tooth orn. below lozenge band; much worn and cracked. Cut in two pieces, *a* and *b*, for transport. 5' 8" × 7½" × 3". Pl. XXXI.

L.B. V. 0014–0018. Uprights of wooden balustrade; see *L.B. V. 008. *0017*, Pl. XXXIII.

L.B. V. 0019. Rail of wooden balustrade; for uprights see *L.B. V. 008. Same pattern as L.B. II. 0046–0051, except that it has five mortices and is narrower. 2' 1½" × 2" × 2¾".

OBJECTS EXCAVATED IN RUIN L.B. VI.

L.B. VI. 001. Sq. wooden block, carved in relief with eight-petalled lotus within plain raised border (broken away on one side). Petals ribbed down middle; twelve small petals round knob centre; oblong mortice in one side; wood much split. 9½" sq. × 3½"; mortice 1 7/8" × 7/8" × 2¼" deep. Pl. XXXII.

L.B. VI. 002. Fresco fr. showing upon pale green border circular white leaves with scalloped edges, green centres, and short tendril-like stems; white field beyond; much worn. Gr. M. 3¼".

CHAPTER XII

RETURN TO THE MĪRĀN SITE

Section I.—TO THE TĀRĪM AND THE DELTA OF THE CHARCHAN-DARYA

Departure from Lou-lan Site.

On the morning of December 29, 1906, we left the Lou-lan ruins to regain ground where there was still water and with it life. The journey was to be made in two separate parties. The large band of labourers, whom the constant exertions and privations had severely tried, was to return to Abdal by the route previously followed, together with those camels which showed signs of exhaustion. Rai Rām Singh, the Surveyor, who was still suffering from acute attacks of rheumatism, and was thus unfit at the time for fresh surveys such as I should otherwise have liked him to undertake in the desert eastwards, was put in charge of this party. I myself, taking ten of the fittest camels and a small number of men, set out to the south-west in order to reach the terminal course of the Tārīm River across the unknown desert area separating it from the dried-up delta of the Kuruk-daryā. The point I was steering for was the small ruined site of Merdek-tim, which Dr. Hedin had visited in 1896 on his journey along the Ilek branch of the Tārīm, and which I wished to examine before returning to my tasks at the ruins of Mīrān.

Ancient delta of *Kuruk-daryā*.

In Chapter XXXVI of my personal narrative[1] I have given an account of the seven trying marches which brought us safely across a great waste of dunes and high ridges of sand to the line of freshwater lagoons linked up by the flood-bed of the Ilek. As reference may be made to that account and to Maps No. 60, 56, and 57 for all details, it will suffice here to mention only a few salient facts of topography which have a quasi-antiquarian bearing. For a distance of close on thirty miles in a straight line, covered in the course of the first two and a half marches, the route, which I was steering by the compass south-westwards, led across a succession of dry river-beds, all forming part of the ancient Kuruk-daryā delta. Their direction, gradually changing from east and west to north-west and south-east, unmistakably proved that they all branched off from the head of the main Kuruk-daryā, which our surveys of 1914 have shown to lie approximately west of the Lou-lan Site. Further to the east and south-east these beds linked up, as will be seen from a reference to Map No. 60, with the ancient river-courses which we had crossed on the march to the Lou-lan Site, and which were traced still more clearly by our surveys of 1914. The first two beds, lying over bare wind-eroded ground, were seen as well-marked, winding depressions. But after we had left them behind, at a distance of only six miles from our Camp 125 at L.B., low dunes kept the ground uniformly covered with sand, and made these depressions more difficult to recognize. Yet there remained the familiar narrow belts of ancient riverine jungle, crossed at intervals by their parallel lines of dead Toghraks and tamarisk-cones, to show plainly the direction of the dried-up river branches once spreading over this deltaic ground.

Relics of historical period.

Nowhere along the route followed on these first few marches were structural remains or any other signs of settled occupation traceable, and the comparative rarity of bare eroded ground

[1] See *Desert Cathay*, i. pp. 415 sqq.

necessarily reduced the chances of finding relics even of nomadic existence or passing traffic. Yet that this riverine area was visited during the historical period of Lou-lan occupation, probably as jungle grazing, was proved by some of the finds made there. Thus, close to our Camp 126 a well-preserved *Wu-chu* coin was picked up, and some nine miles beyond it the fragment of a Chinese bronze mirror, decorated in relievo, C. 126.002. This was the last object in metal found, excepting the fragment of a bronze spear-point, C. 128. 001, which turned up unexpectedly some eight miles beyond Camp 128, long after the last remains of ancient tree-growth had been left behind, about four miles from Camp 127. It may have been brought there by some hunter who had strayed into the desert after game; for that ground must have been wholly devoid of vegetation even in the earliest historical period which at present is accessible to us.

Prehistoric remains.

In prehistoric times, however, human occupation had evidently extended beyond the limits of the area containing the dried-up river-beds which were still traceable; for stone implements of the same primitive type as those found on our march to the Lou-lan Site, and fragments of coarse pottery, probably neolithic, cropped up at rare intervals, not merely in the deltaic area but also on the desolate ground passed between Camps 127 and 130. Yet, judging from the exceeding scantiness and complete decay of such wood débris as we could find there, this ground must already have been an absolute waste in the early historical period. Specimens of these Stone Age remains found between Camps 125 and 129 have been described in the list above.[1a] A well-preserved celt, C. 126. 001, and the 'blades' in chalcedony and jasper, C. 127–128. 002, 003, are reproduced in Plate XXX.

North-south direction of *Dawāns.*

As soon as the last riverine belt of dead Toghraks was passed, about four miles from Camp 127, big ridges of piled-up dunes, or *Dawāns*, were encountered in more and more frequent succession, and bare patches of eroded ground grew rare, even in the broad sandy valleys between them. But if these huge accumulations of drift-sand left little chance of discovering relics of prehistoric occupation, yet they, too, had their quasi-antiquarian interest. They stretched invariably from north to south, and previous experience, gained from the rivers which lose themselves in the Taklamakān, had taught me to recognize the significance of this regular bearing. Such 'Dawāns' are always found running parallel to river-courses where these penetrate into areas of drift-sand. Under the action of physical causes, which need not be set forth in detail here, these sand ridges conform in their bearing to the direction of the barrier which the river presents to the movement of dunes, and to which they indirectly owe their origin.[2] It was easy to see that, far away as we still were from the Tārīm, it was its course, running roughly from north to south in this section between Tikkenlik and the Charchan River junction, which determined the bearing of the Dawāns we encountered in steadily growing heights.

Dawāns parallel to Tārīm River.

The observation is worthy of record here because it is relevant to the question which certain views set forth by Dr. Hedin have raised, whether the present course of the Tārīm south of Tikkenlik is an old one or dates only from the time when the Kuruk-daryā ceased to carry water. This is not the place to discuss the question at length. But I may point out that the north-south bearing of the Dawāns, which remained constant over the forty-six miles, in a straight line, of our

[1a] Cf. above, pp. 367 sq.

[2] For such riverine 'Dawāns', always crossed at right angles where my route led from one river-course towards another in the Taklamakān, cf. *Ancient Khotan*, i. pp. 309, 418 sqq., 444, 453, 483; also above, p. 241, and below, p. 455. My map of the Khotan region accompanying *Ancient Khotan* graphically illustrates these observations.

Though the force which has built up these 'Dawāns' of sand is the wind, their line is not determined by the direction of the prevailing wind. This is clearly seen in the high sand ridges fringing the lower Charchan River course, where it runs right against the predominant north-east wind blowing from the Lop desert. It is only in the formation of the individual dunes that the direction of the wind invariably asserts itself.

route leading diagonally across them, distinctly supports the belief in the antiquity of the present Tārīm course, as far as its general direction in this section is concerned. It does not appear to me likely that, if the present southerly course of the Tārīm were of at all recent origin, it could have made its effect felt with such regularity in the formation of 'Dawāns' so far away to the east.

Dead poplars marking ancient bed.

We have, of course, no means to gauge with anything approaching exactness the chronology of these sand formations. But the impression I have just indicated is considerably strengthened by what I observed at the western foot of the big 'Dawān' below which we pitched our Camp 130 (see Map No. 56) on January 2, 1907. There I came upon the first rows of dead Toghraks since Camp 127, and it is noteworthy that I found them, too, stretching in well-defined lines from north to south. I have before had occasion to mention that the wild poplars of the Tārīm Basin show an invariable tendency to grow in lines parallel to the nearest open water-courses or to channels of subsoil drainage which continue them.[3] Here the dead Toghraks, many of them of large size, all lay prostrate on the ground, and though their bleached and withered trunks and main branches still showed clearly recognizable features, I could see that they must have been dead far longer than those, for instance, which had grown up and died at the Niya Site since it was abandoned about the fourth century A.D. The position of this Toghrak grove, probably marking an ancient channel of the Tārīm, was not more than sixteen miles in a straight line from the present bed of the Ilek branch.

It is, of course, possible to argue that the physical indications just discussed date back to a previous swing of the deltaic pendulum of the Tārīm, i. e. to a much earlier period, a prehistoric one, which preceded the formation of the Kuruk-daryā, and during which the whole Tārīm drainage flowed southward before emptying itself into the Lop lake basin. But no such explanation is possible as regards the archaeological evidence which we shall have to examine presently.

March to *Merdek-tim.*

On the evening of January 4, 1907, the seventh day of this trying tramp across dunes, we struck the hard-frozen Köteklik-köl, one of the string of lagoons fed by the Ilek.[4] Here I found that the many deflexions from our intended straight course, made in the endeavour to avoid the highest portions of successive 'Dawāns', had resulted in our striking the Ilek fully a day's march to the south of the site of Merdek-tim. The distance was easily covered on January 5 by moving north along the frozen Ilek. On the following morning we crossed its wide, marshy flood-bed at Kulacha, and there secured a guide in the person of an old Loplik fisherman. Led by him, we moved north-eastwards for about two and a half miles, across fairly high dunes and depressions with salt pools, until we arrived at the modest ruin which he knew by the name of *Merdek-tim.* We found that it was a small circular fort with a rampart built mainly of stamped clay and overgrown with luxuriant reeds (Fig. 89). Close to the south of it there passed a dry Nullah, which was said to have received water until three years before. To the north-west it connected with the neighbouring lagoon known as Merdek-köl, which itself was fed from the Bāyir-köl marsh of the Ilek. Pitching camp by the little fort, I was able to devote the day to a close examination of its remains, and I soon discovered indications of its early origin.

Ruin of circular fort.

The circumvallation consisted of a rampart which, though decayed under the effect of moisture, was still traceable to a height of ten feet above the present ground level over most of its circular outline. The very construction of the rampart suggested antiquity. Below, it consisted of stamped clay with thin layers of tamarisk fascines inserted at intervals of about a foot. This base rose to five feet above the present level of the soil, but, as its foot could not be ascertained, its original height may well have been greater. Above this came masonry, two feet high, and then stamped clay, still standing to a height of about three feet, both strengthened by the insertion of layers of

[3] See above, p. 355.

[4] See *Desert Cathay*, i. pp. 422 sqq.

tamarisk branches and by a framework of Toghrak beams. The width of the rampart was fourteen feet on the top, and at the base, now mostly covered by sand, about twenty-nine feet. The diameter of the little stronghold, measured from the centre line of the rampart, was approximately 132 feet. The entrance must have been at the south; for there a gate passage, six feet wide, was marked by two rows of massive Toghrak posts, which came to light on clearing the southern segment of the rampart. These posts, four on each side, must have served to carry the roof of the gateway, and probably also to secure the timber revetment of its sides.[5] Their top portions for about three to four feet were in fair preservation, except for the charred ends, giving evidence of a fire; but lower down the wood had rotted away owing to the effect of moisture. As shown by the position of the posts, the gateway passing through the rampart must have had a length of at least twenty-three feet.

Tamarisk-cone above rampart.

The interior of the circumvallation was fairly clear of drift-sand, and near the centre some withered Toghrak beams were found just below the surface. But as on digging down beneath them to a depth of about four feet we came upon moist sand, it was clear that the remains of any structure which might once have stood here must have decayed completely. The north-east portion of the rampart was partly covered by the slope of a tamarisk-cone which rose some fifteen feet above its present top, as seen in Fig. 89. Referring to what has been explained above as to the tamarisk-cone overtopping the ancient fort found south of the Endere Site,[6] we may safely assume that the fact of this cone at Merdek-tim having attained a height of at least twenty-five feet above the level on which the circumvallation was built in itself proves considerable age for the latter.

Find of Han coins.

But a closer search of the rampart soon revealed more definite evidence of its antiquity. On clearing away the sand which covered the faces of the masonry portion, I found that it was composed of large sun-dried bricks very similar in dimensions to most of those which we had seen in the ruined structures of the Lou-lan Site. I distinguished two sizes of bricks, one measuring 18 by 11 inches, with a thickness of 4 inches, and another 14 by 10 inches, with a thickness of $3\frac{1}{2}$ inches. In view of such close agreement, approximately contemporary origin necessarily suggested itself, and this conclusion was strikingly confirmed by a succession of finds of Chinese copper coins which were picked up in various places on the top of the rampart. All belong to types current during Later Han times; two bear the legend *Huo-ch'üan*, first introduced by Wang Mang (A.D. 9–22), and the other four are *Wu-chu* pieces in a clipped condition.

Absence of 'Tati' débris.

None of the usual débris of perishable materials, within or around the fort, could have survived subsoil moisture. The same cause, vicinity of water, explained the complete absence of wind-eroded ground near the ruin and our consequent failure to trace any of the usual ancient débris of hard materials, such as potsherds, small metal objects, etc. Nor did the search made around that day and on the following morning reveal the survival of any other structural remains. Yet the evidence already secured left no reasonable doubt that this small fortified post must have been occupied during the early centuries of our era and perhaps down to the same period as the Lou-lan Site.

Ancient Tārīm course near *Merdek-tim*.

Insignificant as is the ruin itself, its date, as thus approximately determined, invests it with a distinct antiquarian and geographical interest. Its existence at this place proves that a branch of the Tārīm—whether large or small we have no means to decide—must already, during the earliest period of Chinese control of the Tārīm Basin, have flowed close to the present line of the

[5] The method of constructing such a gateway has since received full illustration from the remains of a similar, but far better preserved, gateway which I found leading through the stamped clay rampart of the ruined fort L.C. discovered by me in 1914 south-west of the Lou-lan Site, and dating from the same period as its ruins.

For a similar, but more elaborate gateway, found at the fortified station or Sarai at Kara-dong, cf. *Ancient Khotan*, i. pp. 447 sq.; Fig. 53.

[6] See above, pp. 283 sq.

Ilek, and that a route which required guarding must have passed along it. The importance of this fact must be emphasized in view of the much-discussed theory, first set forth by Dr. Hedin, which assumes that the whole of the Tārīm drainage passed at that period through the Kuruk-daryā beds into an earlier Lop-nōr lying due south of the Lou-lan Site, and to which we have repeatedly had to refer above.[7] It would be impossible to reconcile with this theory the detailed account which Li Tao-yüan's commentary gives us of the Tārīm's junction with the Charchan River and its subsequent course eastwards into the lake north of *Yü-ni*,[8] and the definite chronological evidence afforded by the ruined fort of Merdek-tim saves us from making the attempt.

Evidence for desiccation.

It proves that while the Lou-lan Site was still occupied and the Kuruk-daryā still 'in being', a branch of the Tārīm ran southwards and met the Charchan River, as it does at the present time, before passing into that portion of the ancient Lop lake-bed which now holds the Kara-koshun marshes north of the Mīrān tract. Where the point of junction then lay, what relative volumes of water this southern branch of the Tārīm and the Kuruk-daryā then carried, and similar questions, we cannot hope ever to be able to answer, considering the scantiness of our records and archaeological data as well as the physical conditions of a flat, deltaic region where water, wind, and sand are ever at work effacing surface evidence. One inference, however, seems to me necessary: if at the period preceding the abandonment of the Lou-lan Site, to which Li Tao-yüan's information undoubtedly goes back, the drainage of the Tārīm Basin could fill both the Kuruk-daryā and a southern river branch, whereas at present it certainly would not suffice for both, we can scarcely go wrong in assuming that the intervening period of roughly fifteen centuries must have seen a diminution of the total water-supply, i.e. desiccation, whatever its cause and its progress.

Move down the Tārīm River.

On January 7 I left Merdek-tim in order to move south again by the Tārīm towards Charkhlik and Mīrān. Anxious as I was to start excavations at the latter place in full earnest, I could not forgo the chance of paying a visit *en route* to the ruined site which Captain Roborovsky's survey, as embodied in the Asiatic Trans-frontier Map of the Russian Topographical Department,[9] marked under the name of 'Ketek-sher', i.e. *Kötek-shahri*, near the terminal course of the Charchan-daryā.[10] The journey of six days which brought me to it has been described in my personal narrative.[11] There is the less need here for details regarding it because its first portion lay along a route which keeps close to the main course of the Tārīm, and is well known as it connects Charkhlik with Tikkenlik, Korla, and the other oases northward. The luxuriant growth of wild poplars, forming natural avenues, which we passed by the main bed of the river as far as Shirghe-chapkan, seemed like a vision of that distant age when the lines of fallen dead Toghraks we had so often crossed still flourished by the branches of the Kuruk-daryā.

Hamlet of *Lop*.

Doubly striking in contrast with it was the bareness of the steppe, covered with scanty reeds and tamarisks, over which the road led to the desolate station of Lop. Near it, in a network of lagoons and marshes, the present terminal course of the Charchan River loses itself, to effect its junction with the waters of the Tārīm. Thus surrounded, the fishermen's hamlet known as *Lop* seemed fit to represent all the typical features of this dreary Lop region. As far as I could gather, the restricted use of the ancient local name *Lop* for this particular place is not of recent date. Perhaps it may in some way be connected with the fact that this otherwise insignificant locality is

[7] See above, pp. 359, 361 sq.

[8] Cf. above, pp. 326 sq.

[9] See Sheet xxi, scale 40 versts to 1 inch.

[10] The term *Kötek-shahri*, literally meaning 'the town of dead trees', is widely applied in the Tārīm Basin to sites in and around the great drift-sand desert where remains, real or imaginary, of ancient settlements exist. In the form [*Shahr-i-*]*Katak* it is found already in the *Tārīkh-i-Rashīdī*; see above, p. 320, note 12.

[11] See *Desert Cathay*, i. pp. 427 sqq.; also Map No. 57 for the route followed.

the spot where a settlement of semi-nomadic fishermen and herdsmen of the true Loplik type is found nearest to Charkhlik, Marco Polo's 'City of Lop'.

Our march of January 11 from Lop to the south-east took me right across the delta of the Charchan River. Its condition at the time, as it was practically all dry, except for the main branch passing to the south of Lop station, and yet grazed by large flocks of sheep, seemed an apt illustration of the state which the area south of the Lou-lan Site must often have presented even while the ancient route near it was still used. By a long march on the day following we reached the head of the delta, and further up, by the right bank of the wide ice-covered main bed, the vicinity of the site near the shepherd station of Jigdalik-öghil. Next morning, starting from our camp close to the dry lagoon known as *Shāh-tokhtaning-köli*, I was taken by a guide, whom I had managed to secure from Charkhlik, to the south-south-west. For about a mile our track lay across a belt of luxuriant reed-beds growing round dried-up lagoons. Then we struck a continuous line of sand-hills, up to thirty feet high, and running, as usual, parallel to the river. The Toghraks and tamarisks, mostly dead, which covered them showed that the line, about half a mile broad, marked an earlier river-bed. Beyond, there extended an open wind-eroded steppe of alluvial loess, covered with many low 'witnesses' from four to six feet in height. It stretched parallel to the river, with a width of a mile to a mile and a half. March up Charchan River.

Over this area fragments of coarse hand-made pottery could be picked up in plenty, but nowhere did they lie in such closeness as clearly to show the former position of a permanent settlement. In their gritty coarse substance, due to ill-levigated clay, the mass of the fragments resembled the pottery I had grown accustomed to associate with remains of the Stone Age. Yet a few pieces, like the glazed potsherd, Shāh-t. 004, and the ornamented spindle-whorl, Shāh-t. 006, described in the list below, obviously belong to a later period. My search for any trace of structural remains, or even a single coin or piece of worked metal, remained fruitless. The only 'finds' besides potsherds were a few fragments of stones which evidently had served for grinding. In the end I felt inclined to conclude, from the wide extent over which the débris was scattered and the thinness of its distribution, that the site had seen occupation, sparse but either long-continued or renewed at different times, down to the historical period. It seemed probable that similar remains might survive at other points along the Charchan River where its course had been less exposed to great changes, but that they were hidden from view by drift-sand or vegetation. Pottery remains on 'Tati'.

Next day I marched back to Charkhlik, where a variety of tasks, as described in my personal narrative, and the need of giving my worn-out followers a chance of recovering from fatigues and exposure, urgently called me. These tasks, which included the raising of fresh supplies and transport for the long journey ahead as well as of labour for the excavations at Mīrān, detained me at the Lop headquarters from the 17th to the 21st of January. It was a time of heavy strain for myself in spite of the physical rest and all the ready assistance I received from Liao Ta-lao-yeh, the Amban of the Charkhlik district. A well-bred, scholarly man, he showed genuine interest in my Lou-lan finds, and helped on the work which lay before me with whatever means the scanty resources of his few hundred homesteads could furnish. It was with deep regret that I learned a year later of his death in this dreary place of official exile. On the morning of January 22 I started back to Mīrān with diggers and fresh supplies. Late on the following evening I had the great satisfaction of finding myself again by the bank of the Mīrān stream, now hard frozen, and reunited to my devoted Chinese helpmate, Chiang Ssŭ-yeh. Besides his ever-active self he had brought up from Abdal a useful reinforcement of Lop men to help in the digging. So everything was in readiness to resume our exploration of the Mīrān ruins in earnest. Halt at Charkhlik. Return to Mīrān.

OBJECTS FOUND AT SHĀH-TOKHTANING-KÖLI SITE

Shāh-tokhtaning-köli 001–003. Three pottery frs.; coarse hand-made ware of ill-levigated clay, hard-fired on an open hearth; red to blackish grey. All *c.* $2\frac{1}{4}'' \times 1\frac{1}{2} \times \frac{1}{4}''$ to $\frac{3}{8}''$.

Shāh-tokhtaning-köli 004. Pottery fr.; coarse hand-made ware of ill-levigated black clay, covered outside with (decayed) green glaze. $2\frac{1}{2}'' \times 1\frac{11}{16}'' \times \frac{5}{16}''$.

Shāh-tokhtaning-köli 005. Pottery fr.; hand-made like 001–003, but of less gritty paste. $1\frac{7}{8}'' \times 1\frac{9}{16}'' \times$ *c.* $\frac{1}{4}''$.

Shāh-tokhtaning-köli 006. Terra-cotta spinning-whorl, orn. round outside with single line of incised dashes between two border lines, and on lower surface round edge of hole with small incised triangles and circles alternating; nearly half broken away. Diam. $1\frac{1}{16}''$, thickness $\frac{11}{16}''$.

SECTION II.—THE RUINED FORT OF MĪRĀN

Excavations resumed.

In Chapter XI have already recorded the impressions of my first rapid survey of the Mīrān Site and mentioned the interesting finds which rewarded the trial excavation commenced at the ruined fort. To this I moved out on the morning of January 23 and had our camp pitched under its walls, in order to be near our work and to secure what shelter they might give from the icy winds which rarely cease sweeping the bare desert glacis at this season. Then the men, nearly fifty in number, were promptly set to work to continue the systematic clearing of the interior where our first excavation had stopped a month and a half earlier. It did not take long to get proof that the ruined fort was likely to fulfil the promise held out by our former experimental digging. But before I proceed to describe the resumed operations and their abundant results, it will be convenient to give an account of the structural features of the ruin, as they presented themselves before excavation.

Position of ruined fort.

The ruined fort of Mīrān, marked M. I. in the site plan, Plate 29, rises on the stretch of bare pebble-covered plain which extends, with a total width of about three miles, from the belt of vegetation watered by the present course of the Mīrān stream eastwards to an ancient river-bed, now completely dry. This bed passes not more than half a mile to the east of the fort, and at the time of its occupation is likely to have carried water. Rather nearer on the north begins the belt of tamarisk-cones and scrub which edges the ancient site all along that side and stretches its sombre expanse for miles away. In Fig. 114, which shows the northern portion of the interior of the fort, it is seen filling the background.

Enclosing walls of fort.

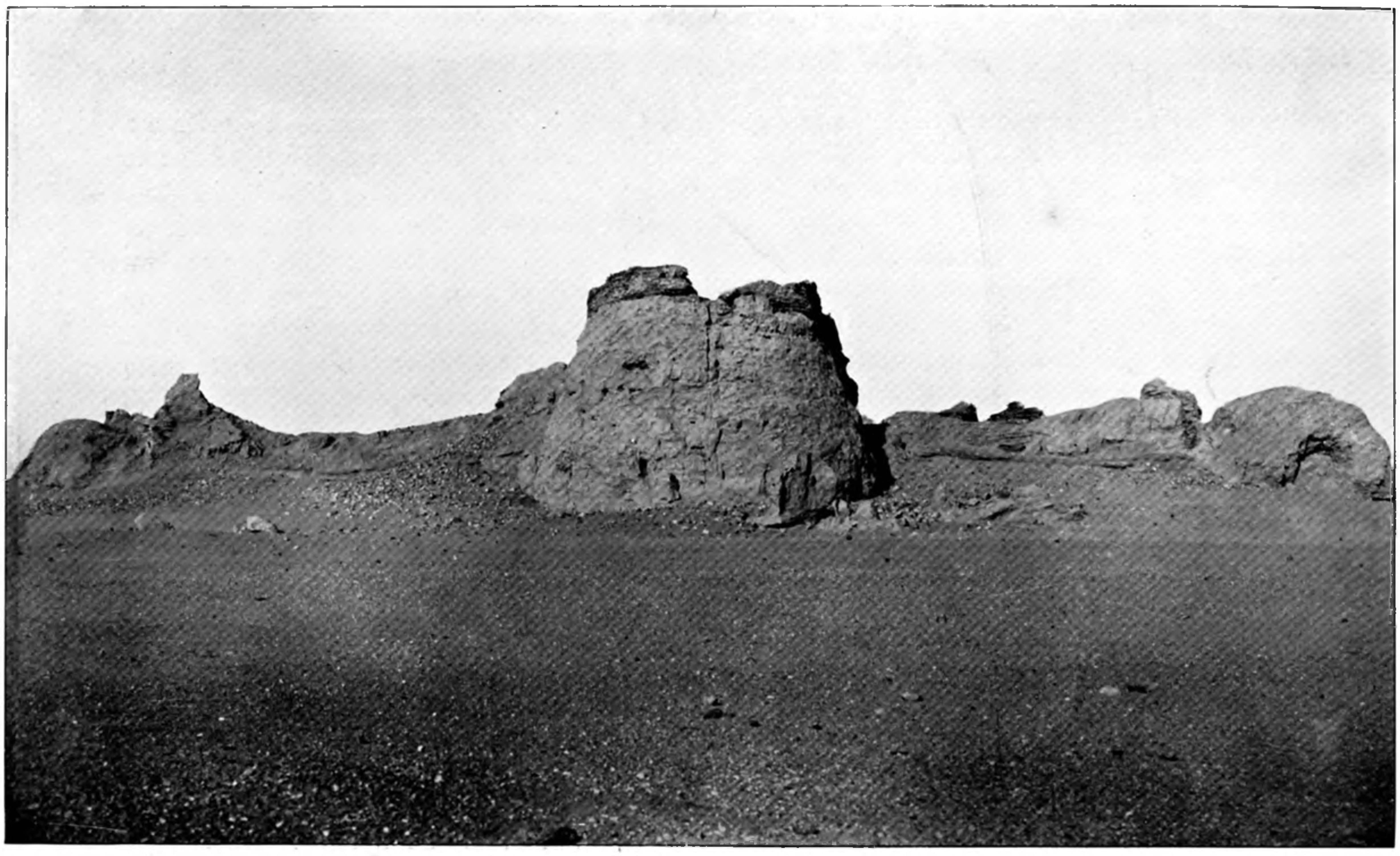
Imposing as was the appearance of the ruin with its walls still rising to a considerable height above the flat ground, yet its irregular shape and construction had struck me from the first as features indicative of a non-Chinese and comparatively late origin. As Plate 30 shows, the ground-plan is that of an irregular quadrangle with the two longer sides facing approximately east-north-east and north-west respectively, and the other two facing roughly west-south-west and south-south-east. For the sake of convenience I shall designate these wall-faces hereafter as the east, north, west, and south sides of the fort enclosure. The two first wall-faces measure about 240 feet each, if we reckon from the outer foot of the adjoining wall-curtains. The west and south faces are considerably shorter, being respectively about 168 and 200 feet in length. Projecting oblong bastions of irregular shape and varying dimensions protected the corners, as seen in the plan. But these were too badly decayed for any approach to exact measurement. The south-west and south-east corner bastions, which are seen in Fig. 113, still stood to heights of about 22 and 24 feet respectively. That at the north-east corner rose to 28–29 feet.

Construction of bastions.

In addition, there was a bastion projecting from the central portion of each wall-face, but the exact position of these central bastions varied greatly, and their size still more. The one to the

111. RUINS OF SHRINES AND STŪPAS, M. III–VI, MĪRAN SITE, SEEN FROM WEST.

112. REMAINS OF RUIN L. B. V, LOU-LAN SITE, SEEN FROM SOUTH-WEST.



113. SOUTH FACE OF TIBETAN FORT, MĪRĀN SITE, WITH CENTRAL BASTION.

114. INTERIOR OF TIBETAN FORT, MIRAN SITE, IN COURSE OF EXCAVATION, LOOKING TOWARDS NORTH-EAST CORNER.

south was by far the largest, and being in fair preservation, as seen in Fig. 113, distinctly resembled a donjon or keep. It was built as a solid mass of stamped clay, or *pisé*, the forms in which the blocks of clay had been shaped being still distinguishable in places, with a height of four and a length of six to seven feet. The solid portion of this south bastion still rose to its original height of 41 feet, and above it was a parapet 7 feet high and 2 feet 4 inches thick. The parapet was constructed of layers of stamped clay, strengthened by tamarisk brushwood at intervals of five to six inches, which accounts both for its good preservation and its dark appearance in the photograph, Fig. 113. The other bastions had suffered too much decay to allow their constructive features to be determined with equal certainty, though the use of tamarisk layers seems to have entered into the construction of them all.

Curtain walls of fort.

The curtain walls showed different methods of building, which may partly explain their varying state of preservation. The south and west walls appear to have consisted of a rampart of stamped clay below, surmounted by a thick parapet built of very rough brickwork with tamarisk layers at close intervals. But of this parapet little survived on the south face, and still less on the west, where wind-erosion had worked great havoc. The rampart may have had a thickness of about 12 feet on the top, where the parapet surmounted it. As it everywhere showed a distinct outward slant, the thickness is likely to have been greater at the base, increasing to about 16 feet. But owing to the débris and drift-sand, which covered the base in most places, exact measurement was difficult. The actual height of the south curtain was from about 18 to 20 feet. The north wall had suffered badly, having crumbled to heights which varied from 10 to 15 feet only above the ground level.[1] This may have been partly due to the absence of tamarisk layers between the courses of roughly-made bricks which, together with lumps of hard clay, seem to have been the only material used on this side. The average size of the bricks here was 15″ × 10″ × 4″.

Construction of east wall.

Curiously enough the east wall-face, though the one most exposed to the prevailing wind and consequent erosion, had on the whole suffered less than the rest, and still rose in portions of its length to a height of 24 feet and more. As seen in Figs. 114–16, 118, its parapet had been breached in places. But elsewhere this parapet, solidly built of bricks and clay with layers of tamarisk twigs between the courses, had survived, and showed a regular thickness of six feet. Its original height could not be determined. The construction of the wall below was peculiar and different from the rest. It may have been intended to give special strength, or else may have resulted from repairs. On the inside there was a thickness of about three or four feet, consisting of strata of clay and bricks separated at intervals of about ten inches by layers of tamarisk twigs, as seen also in the parapet (Figs. 115, 116). Each stratum contained a single course of sun-dried bricks, measuring 16 by 8 or 9 inches and 4 inches thick, and a layer of stamped clay above and below. Towards the outside there followed next a wall of masonry about two feet thick, built of bricks of the same size, and beyond this a heavy revetment wall of stamped clay, reinforced by strong and closely-set branches of tamarisks or Toghraks. Owing to the corrasive effect of wind-driven sand, the ends of these pieces of wood were seen to project beyond the surface of the outer wall, like the spokes of a ladder.

Erosion watched at work.

Heaped up by the prevailing east-north-east wind, a slope of fine gravel and drift-sand ascended on the outside of the east wall to about the level marked by the foot of the parapet, and the slow forward movement of this corrading material had caused the parapet to be breached in several places. I subsequently experienced this erosive process as it were in person and felt it only too acutely, while I stood in the breach near the south-east corner (Fig. 116) watching the excavations which had to be carried on there. The icy wind which swept across the rampart, carrying before

[1] Portions of the north wall are seen in Fig. 114 and also in *Desert Cathay*, i. Fig. 135.

it a constant blast of fine gravel and coarse sand, made it difficult for any one to hold out long there, and even my hardy Loplik diggers had to be relieved in brief shifts. That erosion had not progressed much further and had not yet succeeded in cutting through the wall altogether, after breaching the parapet, might well have caused me surprise. But in the refuse-filled rooms which my excavations brought to light immediately behind the east wall-face I had the clearest explanation of its ability to withstand the wind's onslaught for over a thousand years.

Interior wind-eroded near west wall.

Even before, on my first visit to the ruined fort, as described in Chapter X, the force of wind-erosion had been fully brought home to me by the observation that within the west wall-face the ground had been scooped out to a depth which, as comparison with the lowest layer of refuse behind the north face showed, lay fully ten feet below the original level of the enclosed area. It was obviously by the agency of the fine gravel and sand which the prevailing winds were driving over the east wall that this natural excavation had been effected, and it seemed safe to conclude that this western portion of the enclosure had not been occupied by dwellings, which might otherwise have protected the soil from erosion. The obvious explanation of this was that any quarters built along the west wall-face would have been exposed far more to the cutting east-north-east wind than those near the sheltering east wall. The eroding force of the wind here also accounted for the badly-decayed condition of the west wall between its central bastion and that guarding the north-west corner. The stumps of three massive posts, still rising in a row above the ground by the side of the broken rampart where it showed a complete gap, evidently marked the position of the gate leading into the fort. Everything else had been slowly ground down and blown away.

Evidence of earlier occupation.

A few general observations connected with the outer appearance of the ruined fort call for record here. In many places, but especially in the big south bastion, I noticed that the stamped clay of the rampart contained plentiful fragments of pottery which had become embedded at the time of construction. Most of these potsherds were of a well-levigated clay and of superior make. This was clear proof that the ground close by, from which the clay for building the walls and bastions must obviously have been obtained to save labour and transport, had been occupied during an earlier historical period. To this important fact I shall have repeated occasions to refer hereafter.

Ground surface near fort.

Some quasi-chronological interest attached also to another observation. At no point outside the foot of the walls was the effect of wind-erosion noticeable except at the north-west angle, where the ground immediately adjoining the ruined corner bastion showed erosion to a maximum depth of six feet. I noticed this increased scouring capacity of the wind at the north-west angle in some of the other ruins of Mīrān, and it may be connected with the whirl produced by the wind sweeping round the end of a wall which extends approximately parallel to its own course, and seems, somehow, to act like a funnel. At first the absence of any indications of a general lowering of the surface level around struck me as a sign suggesting a somewhat late origin for the ruin. But on closer observation I found that I must also take into account the peculiar surface conditions resulting at this site from the thin coating of gravel with which preceding deflation has covered the alluvial soil. The absence of indications of a lowering of the surface level was all the more curious in view of the fact that less than a quarter of a mile to the south of the fort I found a group of small Yārdang terraces rising above wind-eroded troughs fully 17 feet deep in places. Fig. 132 shows one of these terraces occupied by the ruin M. x.

Stones stored on fort walls.

A minor puzzle, which, however, was quickly solved, was presented by the abundance of big stones which lay scattered along the foot of the walls, and particularly along that of the big south bastion. I did not anywhere find evidence that such stones (no doubt brought from the higher rubble-filled stream bed) had been used as building material in the walls. I was therefore led to

conjecture that these stones might originally have been kept on the parapets, to be thrown down by the defenders in case of attacks. This guess found early confirmation; for on my subsequent visit to the Kan-su marches I saw such big stone 'ammunition' not merely often lying at the foot of the ancient watch-towers of the Tun-huang Limes, but still regularly stored for defensive use on the parapets of modern town walls and village forts built since the last Tungan rebellion.

Section III.—EXCAVATIONS IN THE MĪRĀN FORT

Quarters excavated under east wall.

It was under the protecting cover of the slope of fine gravel and sand which had accumulated on the lee side of the east wall of the fort that my trial excavation of December 8 had first disclosed the remains of a series of small, roughly built quarters, which that wall had once helped to shelter from the bitter north-east winds. In my account of this first excavation,[1] I have already described how the thick layers of refuse filling these rooms had yielded Tibetan documents in plenty, besides other remains, making it abundantly clear that the ruined fort had been occupied for a long time during the period of Tibetan predominance in the Tārīm Basin, roughly during the later half of the eighth and the whole of the ninth century A.D.

Refuse-filled rooms.

The excavations resumed on January 24, and continued without intermission during five days in the face of very trying atmospheric conditions, soon showed that my hope of finding more relics of that occupation was well founded. The previously cleared quarters, M. I. i–vii, had extended in an irregular line south of the north-east angle and, as the plan, Plate 30, and the photograph, Fig. 114, then taken show, at a little distance from the east wall of the fort. It was in the space intervening, nowhere more than about seventeen feet wide, that the resumed digging soon disclosed another row of small rooms, M. I. viii–xi, which subsequently proved to extend right along the east wall to the neck of the south-east bastion. Whereas in the previous row only the first two rooms, i and ii, had been sufficiently covered by the slope of gravel and sand to retain their roofing, it had been preserved in the rooms viii–xi through the protection afforded by the rampart behind. But it was not until the consolidated masses of refuse which filled these rooms right up to the roof, constructed of rough Toghrak beams and layers of reed fascines, had been dug down to the floor, that I realized how much these accumulations of rubbish must have helped to strengthen the wall itself against wind-erosion.

Rough construction of quarters.

The rooms themselves were built in a very rough and irregular fashion of coarse brickwork and clay, with walls of varying thickness. As the photograph, Fig. 115, of rooms viii and ix shows, the walls still retained in places their smoke-begrimed facing of plaster. The wall dividing these two rooms was only nine inches thick, and the floor of the second nearly three feet higher than that of the first. Similar differences in level between adjoining quarters were frequent, and indicated haphazard construction on various occasions. Only in a few, like xi and xiv, could low fireplaces of mud plaster be traced. Owing to the way in which the walls of friable clay and bricks were apt to crumble away when the refuse filling the rooms was being removed, it was often difficult to ascertain where approach to them had lain. Elsewhere, the entrances appeared to have been walled up with mud when the quarters abandoned to refuse had been completely filled up and ceased to be useful even as dust-bins.

Deposits of filth.

The most remarkable feature about these humble quarters adjoining the east wall was the fact that a number of them, especially viii, ix and xiii, xiv, were found crammed with refuse, reaching almost to the roofing wherever this survived. In this there mingled thick litter of reed straw, chippings of tamarisk wood, and sweepings of the hearth with what, for brevity's sake, we may call

[1] See above, pp. 348 sq.

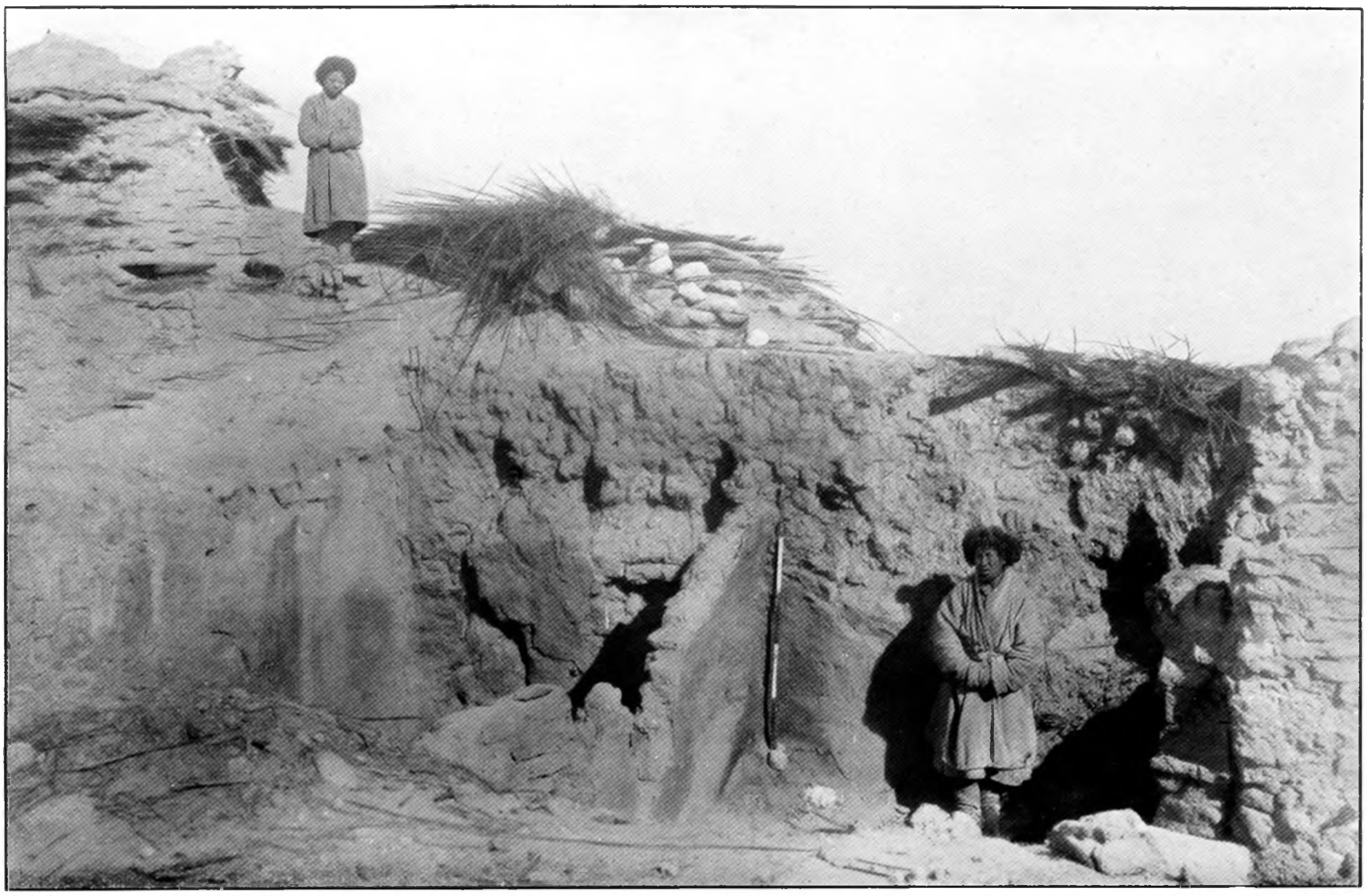
contents of the waste-paper basket and every conceivable sort of dirt, including filth-encrusted rags, animals' bones, and leavings of a far more unsavoury kind. The all-pervading smell of ammonia brought home the fact that each of these little rooms, after its use had become impossible even for dirt-hardened Tibetan soldiers, must also have served them during longer or shorter periods as a latrine. The thick deposits of filth here seemed to be less interspersed with fine drift-sand than the ancient rubbish-heaps that it has been my lot to clear elsewhere within the Tārīm Basin. The partial absence of this effective desiccating and disinfecting agent may possibly have had something to do with the peculiar age-persisting 'smelliness' which I shall always associate with our operations at the Mīrān fort.

Refuse accumulated in rooms.

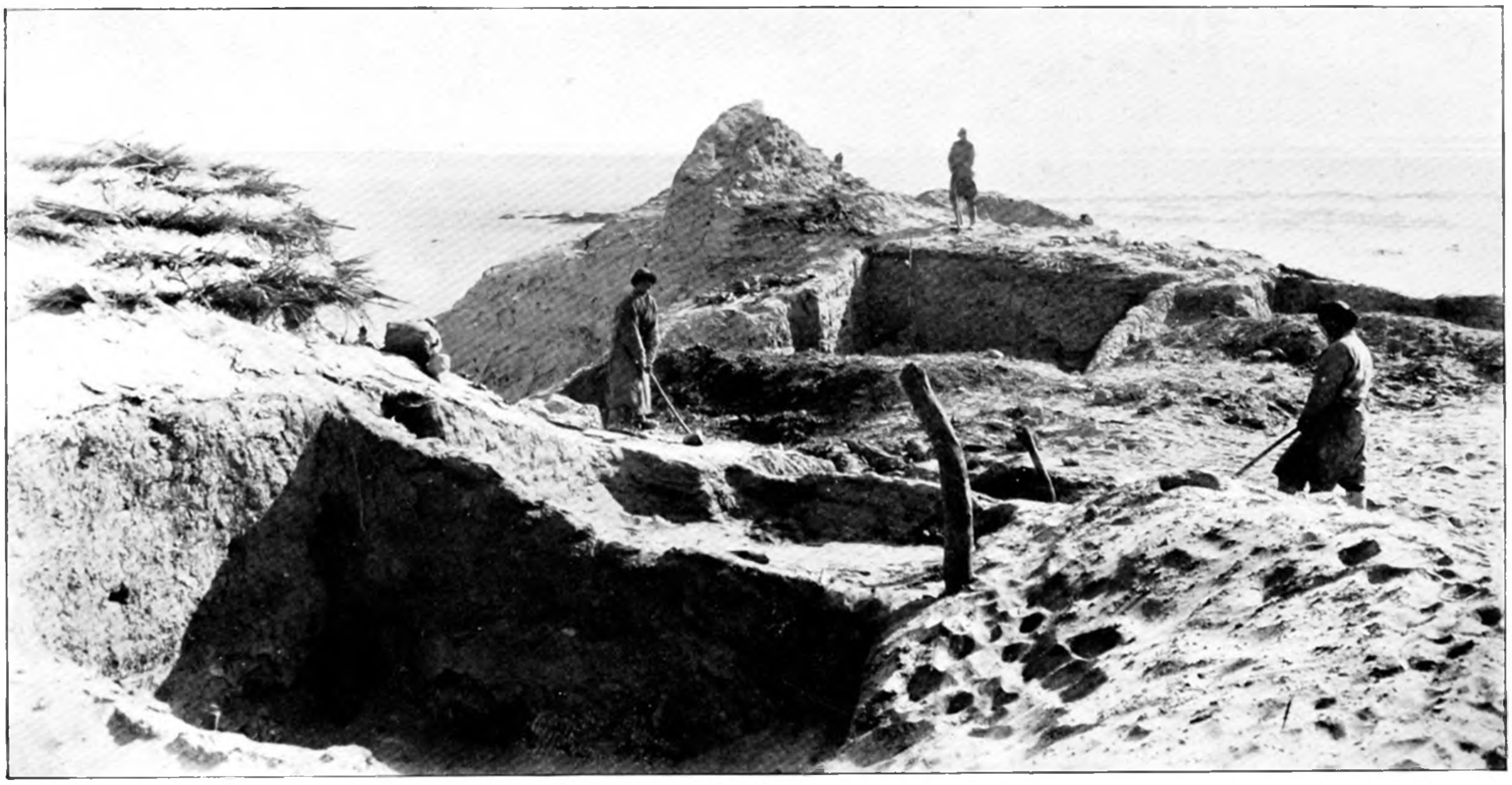
It would have been more difficult for me to realize the strange conditions in which such big accumulations of dirt could grow up in quarters intended for human occupation, and quite close to others still actually thus occupied, if the experience of subsequent travel had not shown me exactly the same process 'in being'. It is well illustrated by the conditions into which portions of the houses, *recte* hovels, used as inns along the Chinese high road from Kan-su to the oases of Turkestān are allowed to fall, while others immediately adjoining are still regularly frequented as shelters. In many instances the erection of new mud hovels would there be found to cost less trouble and expense than the clearing out of the rubbish-filled old ones, and the same is likely to have been the case within this Tibetan station. Far away to the west, too, I have met with sights which strikingly called up pictures of the interior of the Mīrān fort at the time when its refuse deposits were still growing. Thus in November, 1915, on my journey through easternmost Khorāsān, I found the old, tumbled-down townlet of Tabas Masīnān crowded with domed mud hovels of the usual Persian type, which were built up in tiers against the enclosing high walls. The later and still tenanted quarters could only be reached by climbing over the roofs of others which prolonged occupation had completely choked with refuse and rendered uninhabitable even for the humble cultivators now settled within the small town.

Abundance of Tibetan records.

But what invested those modest quarters within the ruined fort of Mīrān with their special antiquarian interest was not the great extent of the refuse accumulations, but the remarkable abundance in which documents, almost all Tibetan, on wood and paper were to be found among the deposits, besides small objects illustrating the daily life of the place and period. Though all the rooms which the plan, Plate 30, marks with numbers furnished documents or miscellaneous objects, the number of such finds varied greatly, and not always in proportion to the quantity of general refuse contained in each. A reference to the inventory of Tibetan documents prepared by Dr. Francke and to the Descriptive List below will fully illustrate this. By far the richest in 'finds' were the refuse layers which were cleared in the rooms i, ii, iv, vii, viii, xiv. As a glance at the plan shows, all these are to be found in the line extending closely along the east wall. In view of the obvious advantage which its shelter afforded, we may safely assume that the quarters of those to whose 'waste-paper baskets' most of the written remains must be attributed were situated on that side. About the original use of individual rooms it is impossible to assert anything more definite than that those which were found, like i, ii, iv, viii, filled with refuse to their full height (in the case of viii about eight feet and six inches) are likely to have been vacated and turned into dust-bins earlier than the rest. The fact that the rooms x–xii, and the one adjoining the last on the south, had floor levels appreciably higher than those in xiii and xiv would point to later construction. The last-named room, seen in the centre of Fig. 116, was built partly casemate-like into the thickness of the rampart where it meets the south-east bastion. Though all its upper wall had been carried off by erosion, the refuse which remained in it, to a height of six feet, was enough to yield well over 200 documents, and among them several particularly large and well preserved.



115. ROOMS viii, ix ALONG EAST WALL OF TIBETAN FORT, MĪRAN SITE, AFTER EXCAVATION.



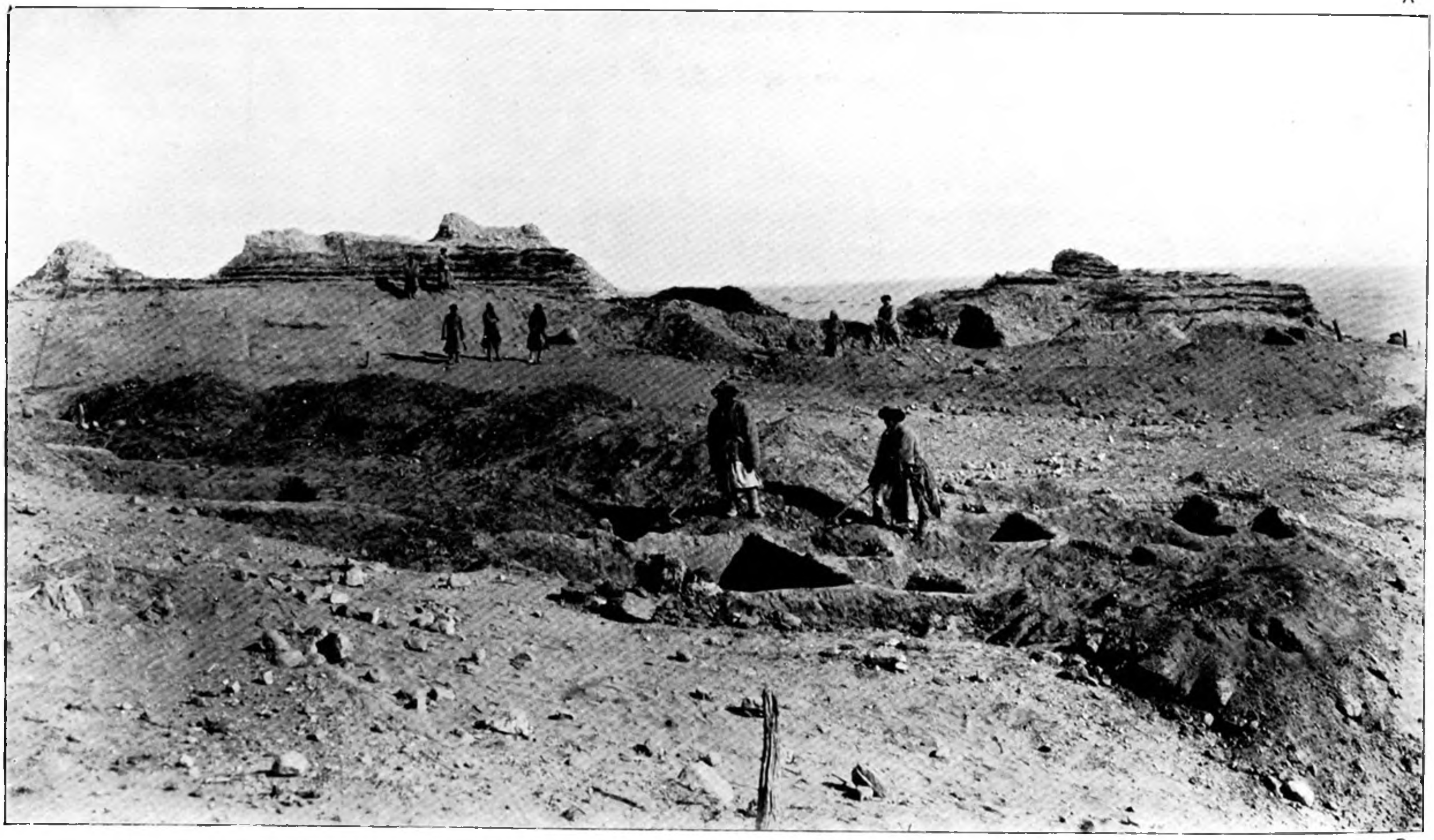
116. ROOMS xii-xv IN SOUTH-EAST CORNER OF TIBETAN FORT MĪRAN SITE, IN COURSE OF EXCAVATION.

A

B

117. CENTRAL BASTION AND EAST FACE OF TIBETAN FORT, MĪRAN SITE, SEEN FROM INTERIOR.
A B marks line of ioining with Fig. 118.

A



B

118. EAST FACE OF TIBETAN FORT, MĪRĀN SITE, SEEN FROM CENTRAL AREA.
A B marks line of joining with Fig. 117. In foreground grain pits, &c., in course of excavation.

As the excavations were extended further towards the centre of the circumvallated area and along the north face (see Figs. 117, 118), they disclosed an agglomeration of hovels, many of them very small and all built with even greater irregularity in ground-plan and floor-level than those found on the east side. As the walls were mostly quite thin here, built of mere clay or the coarsest brickwork, and in addition had suffered much from erosion, the disposition of the various hovels and small cellar-like apartments was as difficult to trace as that of a rabbit warren. As work had to be carried on in different places simultaneously and finds continued in rapid succession, my attention was necessarily distracted, and the record of structural remains, kept and entered in the plan, could not aim at full precision, and had in part to be left schematic. The striking irregularity in the levels observed among the broken walls in the centre of the area of the fort and towards the foot of the great south bastion suggested that these were remains of structures erected at different periods, one above the débris of another. The rooms xl, xlii, xliv yielded a considerable number of documents. Agglomeration of hovels in centre.

The rooms unearthed near the north wall were somewhat less confusing in arrangement, and as they were often in better preservation, it was possible to make quite sure that most of the small ones possessed no entrances, and had evidently been approached from above. Some with bottoms four or five feet deeper than the rest had probably served as places of storage for the supplies and chattels of the motley collection of soldiers and petty officials whom the stronghold sheltered at different periods. Such use would account for the curious platforms built across the corners in some of these underground rooms, e. g. xxvi. Sheaves of wheat, barley, and millet mixed plentifully with the sand and refuse in some of them,[2] while written remains were wholly absent. Other rooms, like xxiv, xxvii, xxviii, seemed to have served as modest living quarters, and in these a fair number of Tibetan records was found near the floor. From a row of small compartments also, cut into the north rampart, near xxxi, a few Tibetan fragments were recovered. But a far more interesting discovery rewarded the clearing of the modest apartment xxxii, where, on the floor and under a cover of only two feet of refuse and sand, there were brought to light three fairly large fragments of paper in Runic Turkish, the only finds in that script from any of my sites in the Tārīm Basin. I shall have to recur to them further on. To the west of xxxii the protecting cover of stable refuse thinned out, and erosion had left but the scantiest traces of other small structures which had once extended towards the fort gate. The cluster of mud hovels near the centre of the area of the fort would probably have shared the same fate if a consolidated crust of sheep-dung, deposited over their remains at some period, had not provided protection. Rooms and storage places on N. side.

Among the relics of archaeological interest which had found a safe refuge in the rich layers of refuse preserved within the ruined fort, Tibetan records on wood and paper were by far the most abundant. Not counting pieces which from various causes have become illegible, the total number of such documents amounts to over a thousand. Complete effacement of the writing in many instances was not to be wondered at, seeing the close association of these remains with the amount of decayed animal and vegetable matter which had also found a resting-place in the walled-in dust-bins. It often encrusted the written records so thickly that it required quite as much care to discover and extract them as subsequently to clean them. Condition of Tibetan records.

In the case of both classes of documents outward indications had made it probable from the first that the majority of these Tibetan records belonged to official or private correspondence. A considerable proportion of the narrow slip-like tablets, to which form practically the whole of the wooden stationery at this site was confined, showed at the left end of their obverse raised oblong seal sockets, as seen in M. I. vii. 35; viii. 22 (Plate CLXXI). These often still retained grey clay from the seal impressions once filling them. The notches generally observed in the longer side rims of Tibetan records on wood.

[2] For specimens see M. I. xxvii–xxviii. 001; for other specimens of grain see M. 001, I. 0060 in *List* below.

the sockets probably served to secure bits of cloth or other soft material, which may have been wrapped round the ends of the slips to protect the clay sealings in transit. I found no signs of any contrivances, such as wooden covering-tablets or envelopes, which might have been used to keep the contents safe from unauthorized inspection. In this as in other respects, too, the relics of the Mīrān fort show a distinct falling-off from the standards of technical skill exhibited by the remains at the Niya and Lou-lan Sites. On the other hand, the similarity to the stationery and other remains subsequently found at the fort of Mazār-tāgh, and also dating from the time of Tibetan predominance, is striking.

Shape, etc., of wooden documents.

The average length of most of the wooden slips, when complete, varies from six to eight inches, and their width never exceeds two inches. The specimens reproduced in Plate CLXXI will suffice to illustrate such variations as are to be found in the size, shape, and writing of such slips. M. I. xxxiii. 5 shows three small label-like tablets fastened together through string-holes. Of the slips found detached a considerable proportion also have string-holes, as if they had been intended to form part of a series or to be filed together. A string-hole invariably appears in the numerous short wooden labels containing only an address, of which M. I. xxvii. 8 ; xxviii. 006, in Plate CLXXI serve as specimens. The few wooden records of unusual shape and length, such as M. I. 001 ; ix. 1 ; xiii. 11 ; xvi. 3, measuring up to 22 inches and inscribed sometimes on three or four sides, are almost all of the nature of tally-sticks, as a reference to Dr. Francke's inventory shows. M. I. xxviii. 6 in Plate CLXXI helps to illustrate their appearance. The wood of these sticks and also of many of the slips seems that of the tamarisk, which, as the abundance of chippings in the refuse-heaps showed, must have been the material most conveniently at hand in this tract. But the wood of the Toghrak and cultivated poplar seems also to be represented among the Mīrān documents.

Tibetan records on paper.

The predominant use of 'wooden stationery', which the finds in the Mīrān fort prove for the period of Tibetan occupation, is curious at so late a time. It points to the conclusion that paper must have been difficult to obtain, the supply not being local, and further evidence of this is given by the paper documents and texts found there. Their number amounts to little more than a fourth of that of the records on wood. Most of the letters and documents are written on oblong sheets of paper, as seen from the specimens reproduced in Plate CLXX. In the case of a considerable number, seal impressions affixed in red ink attest the official character of the papers. The sizes of the sheets vary greatly, the largest, M. I. xxviii. 002, measuring fully 16 by 11 inches, while another one, M. I. xliv. 6, contains no less than sixteen lines of closely-packed writing, over a length of about eleven inches. The paper of most of these documents is of a very flimsy and coarse texture, and in none is the leaf made fit for writing on both sides.

Tibetan Pōthī leaves.

A striking contrast to this is presented by the rare leaves and fragments of strong, well-made paper, obviously of a different substance, which by the clear and regular writing on both sides, the ample space between the carefully ruled lines, and the string-holes could be recognized on the spot as having belonged to Pōthīs of Buddhist texts. Dr. Francke's examination has since confirmed this assumption and proved that leaves and fragments of this kind, like M. I. ix. 9 ; xiii. 6, 13 ; xix. 7, 8, 10, 11, 13 ; xxviii. 004 ; xliv. 0014 (Plate CLXX), contain portions of Mahāyāna texts. The largest of them, M. I. xiii. 6, is over two feet in length. Similar leaves, which I discovered, in 1901, in the temple of the Endere fort as relics of the Tibetan occupation, were proved by Professor J. von Wiesner's microscopical examination to be made of paper for which the fibres of the Daphne plant, quite unknown to the Tārīm Basin, had supplied the material.[3] The close similarity in the

[3] See *Ancient Khotan*, i. p. 426, and Prof. von Wiesner's article in the *Sitzungsberichte* of the Imperial Academy, Vienna, cxlviii (1904) pp. 14–21 (reprint).

appearance of the paper suggests that these relics of the devotion of those who lived in, or passed through, the Mīrān fort had also found their way there across the Tibetan plateaus from distant monasteries in the south. In conclusion, it should be noted that quite a number of the paper documents were found as originally folded up, though not always so cleverly as M. I. ii. 40 (Plate CLXXI), and that in some I thought I could recognize narrow vertical ruling as if intended for Chinese writing in the customary columnar arrangement.

Section IV.—MISCELLANEOUS FINDS IN THE MĪRĀN FORT

Relics of daily life.

Great as was the wealth of written remains recovered by our clearing of the ruined fort of Mīrān, I knew that their detailed decipherment and interpretation would prove a task needing much time and labour, and that even when it was accomplished it could scarcely be expected to throw as much light on the daily life led at the site during the period of Tibetan occupation as careful observation of what has survived of its setting. In the preceding pages I have endeavoured accurately to describe the humble quarters once tenanted by the garrison and the condition in which they had been left. No information to be gathered from records could compare in convincing directness with the impression, obtained on the spot, of the squalor and discomfort in which those Tibetan officials and soldiers must have passed their time at this forlorn frontier post. But the accumulations of refuse which they had allowed steadily to rise around them, with an indifference to dirt such as my excavations have revealed nowhere else, have at any rate proved a thoughtful provision for the antiquarian interests of posterity. The remains of implements, apparel, arms, and other articles of daily use which were embedded and preserved in them permit us to supplement the picture of their life in a variety of curious aspects. All the objects are modest in make and much worn in condition. But considering that the deposits must have taken a long time to grow to their present height, this uniformity may be taken as additional proof that they faithfully reflect the local conditions of the period.

Pieces of leather scale armour.

Among the relics thus recovered, the pieces of leather scale armour may be mentioned in the first place, on account of the interest attaching to their technique and material as well as of their great number. The fact that batches of them came to light in a series of different quarters is significant evidence of the prevailing military character of those who lived in the fort, and 'shed' there their worn-out equipment. The first finds, M. I. 0068–71 (Plate L), were quite detached scales of oblong lacquered leather, varying in size and ornamentation, as the details noted in the Descriptive List below show, and without any definite indication of their original purpose and relation. That I could nevertheless recognize them at once in their true character was my reward, as it were, for having six years before correctly identified a small piece of hard 'green' leather, N. xv. 005, from a rubbish-heap of the Niya Site as having once belonged to scale armour.[1] This conjecture of mine had subsequently received striking confirmation when Mr. Andrews discovered, in a suit of mail brought to the British Museum from the Lhassa expedition of 1904, scales laced exactly after the fashion which that single little piece of leather had suggested.[2]

Method of lacing leather scales.

The succeeding finds within the Mīrān fort have furnished us with a considerable quantity of scales belonging to lacquered leather armour, as the following list shows: M. I. i. 002 (three pieces),

[1] See *Ancient Khotan*, i. p. 411. For other specimens recovered there in 1906, see above, p. 246, N. v. xv. 004–006.

[2] Cf. the note in *Ancient Khotan*, i. p. xvi (Addenda). I must mention here that owing to an erroneous interpretation of Mr. Andrews's remarks I assumed there that the scales of the Lhassa mail suit were round-headed. In reality their shape is oblong; see below, p. 465.

For earlier Chinese references and representations of leather scale armour, cf. now Laufer, *Chinese Clay Figures*, i. pp. 195 sqq., 292.

003 (three pieces); iv. 0011; vi. 001; ix. 002 (twenty pieces), 003 (twenty-four pieces), 004; x. 006; xiii. 001. c.; xiv. 0074; xv–xvi. 004; xxiv. 0040 (eleven pieces). It is, therefore, all the more noteworthy that among all these scales there is not one which, in shape or method of lacing, agrees with the type represented by the Niya Site specimen of mail. Whereas in this type the scales have a rounded upper end and are laced through three holes on each of the longer sides and one at the top end, the scales of the Mīrān fort are all of oblong shape and have different and, in some ways, more complicated systems of lacing. Fortunately, these can be studied in some sets where the scales are still joined to their neighbours by the original fastening of narrow leather thongs, as seen in the reproductions of Plate L (M. I. ix. 003; xxiv. 0040).

Lacquer and ornamentation of scales.

That the scales belonged to a number of different suits of armour and varied in size as well as in ornamentation will be clearly seen on reference to the details recorded in the several entries of the Descriptive List. Yet, at the same time, we note a certain uniformity in style and technical make as well as in the methods of lacing. The pieces of hard 'green' leather, perhaps of camel skin, vary considerably in size, from an average of $2\frac{3}{4}'' \times 2''$ to about $4\frac{1}{4}'' \times 2\frac{1}{16}''$ (cf. M. I. ix. 002, 003), but are always oblong with a slight outward curving. Originally all of them bore thick lustrous lacquer on both sides, generally applied in successive coats, the number of which varies up to seven (M. I. xxiv. 0040). Among the colours used, a brilliant red and black are by far the most prevalent, but a dark red-brown and yellow (see e.g. M. I. xiv. 0074, Plate L) are also met with. Ornamentation of individual scales was effected by scraping small designs such as concentric rings, ellipses, figures resembling commas or an inverted S, etc., through successive overlying coats of lacquer, after the fashion of *sgraffito* work. In some sets of scales (e.g. M. I. ix. 003, Plate L) bronze rivets are found, intended for ornamentation only.

Fastening of leather scales.

That the methods of fastening the scales must have varied in detail in different suits is shown by the diverse number and position of the holes to be found in certain sets of scales. Yet a comparison of those sets which still retain a number of scales as originally laced together (M. I. ix. 002, 003; xxiv. 0040, Plate L) shows that the system was similar in essential points. For the purpose of lateral fastening the longer sides of the scales were placed so as to overlap, and were then laced closely together by means of thongs passed through sets of holes near the edges. The exact fashion of this lacing has been explained in the descriptive notes of the List below. The vertical attachment was effected in a cleverly-designed way by two thongs running parallel through pairs of holes and round a thong which passed horizontally behind the rows of scales without ever appearing in front.

Overlapping of scales.

It is certain that the rows of scales overlapped, and there is a probability that this overlapping was arranged upwards, in a fashion which differs from the classical and mediaeval examples of Europe but is illustrated by specimens of scale armour reproduced in Central-Asian and Graeco-Buddhist art, as well as by the Niya Site scales and the old Tibetan suit of mail already referred to.[3] It is true that the scales to which I refer in these specimens, excepting the last named, are not oblong but of the round-headed type, and that where the lower or skirt portion of the same armour has oblong scales, these are represented without any overlap, whether upwards or downwards. But it should be noted that in the Tibetan suit of mail from Lhassa the scales are oblong throughout, overlapping upwards, and further that wherever we meet with scale armour in the Buddhist paintings from the 'Thousand Buddhas', usually in figures representing the Guardian Kings of the quarters or Lokapālas, the portion of the mail below the waist is made up of oblong scales always arranged

[3] See above, p. 463; *Ancient Khotan*, i. p. 252; ii. Pl. II. For the scale armour worn by two figures in a well-known relievo of the Lahore Museum, representing Māra's army, see Foucher, *L'art du Gandhâra*, i. p. 405, fig. 202.

so as to overlap upwards.[4] This direction of the oblong scales claims here the more notice because in almost all these Tun-huang paintings the upper or breast portion of the armour is depicted with round-headed scales overlapping each other downwards.

Arrangement of oblong scales.

In most of the relievos and paintings of Central-Asia or Graeco-Buddhist art known to me where representations of scale armour are met with, round-headed scales appear in the breast portion and oblong ones are confined to the skirt. But it is significant that among all the lacquered leather scales of the Mīrān fort not a single one of the round-headed shape was found. This seems distinctly to suggest that the leather mail suits worn by these Tibetan soldiers were made up entirely of oblong scales. We actually have an example of such an arrangement in the old Tibetan suit of mail from Lhassa, with oblong scales overlapping upwards. Similarly, in the small stucco relievo of a mail-clad warrior, Mi. xii. 0015, 0017 (Plate CXXXV), from the 'Ming-oi' Site of Kara-shahr, all the scales are oblong, though their exact arrangement cannot be made out. Also in the Lokapāla picture, Ch. lv. 0020, we find oblong scales both above and below the waist, represented here with a clear overlap upwards. In support of the view just mentioned, reference might be made also to the fragment of leather armour, M. I. vi. 001, which by its curved shape and unusual thickness suggests use as a shoulder-piece. Another elaborately worked fragment of large size, M. I. viii. 001 (Plate L), seems to have been intended to protect the throat, and may have belonged to a leather helmet ornamented in a style to match the lacquered scale armour. Curiously enough, the representation of a helmet, apparently of scale armour, survives in a fragment of pottery, M. I. 0056 (Plate LI), bearing incised the head of a warrior. Its good drawing contrasts strikingly with the roughness of the make and material of the pottery.

Pens, inscribed seals, etc.

That among the occupants of the fort there must have been, besides the military, a strong clerical element is proved not only by the quantity of written records, but by the finds of wooden and reed pens (M. viii. 0012 ; xxi. 1 ; xxiv. 009 ; xl. 0014 ; xlii. 003, Plate LI). It is strange to note by comparison the few remains of arms found within and outside the fort. Apart from a fairly well-preserved sling of stout goat's hair, M. I. 0081 (Plate L), they comprise only fragments of arrows (M. I. 0059, Plate LI ; ii. 0026 ; ix. 009). A speciality of the site, no doubt connected with Tibetan usage, are the seals cut into tips of horns, of which three, M. I. vii. 31, 003, 004 (Plate LI), turned up in the same apartment.[4a] The official seal impressions in red ink found on so many of the Tibetan paper documents must, judging from their shape, have been made with seals of a similar kind. The Tibetan inscription on one of these horn seals, M. I. vii. 31, should be noticed here, because Dr. Barnett is inclined to read it as containing the 'non-Tibetan syllables *āṅ-tōnē*' and to believe 'that they possibly represent an attempt to render the Western "Anthony"'. If this interpretation proves well founded, we might well think of the owner of the seal as a Nestorian Christian, settled at Mīrān in Tibetan employment. The discovery of fragments of Christian texts at Turfān sites has supplied definite archaeological evidence for what we otherwise knew of the spread of Nestorian Christianity into Eastern Turkestān about this period.[5]

Seal with non-Tibetan name (?).

Miscellaneous implements, etc.

A variety of implements connected with spinning and weaving, such as M. I. iv. 009 (Plate LI), 0012–13 ; vii. 005. a, b (Plate LI) ; viii. 008–10 ; xxiv. 005, 0037, prove that the garrison of the fort found time for domestic occupations. The numerous pieces of stout netting found, of which

[4] Cf. for such Lokapāla figures in scale armour Pl. LXXXIV, LXXXV, XC. All the ten figures there reproduced, with one exception, have the kilt-like lower portion of their scale armour made up of oblong scales which are represented as overlapping upwards. In Ch. 0010, Pl. LXXXIV, the skirt of the mail suit is shown with scales which have a rounded end and overlap downwards, just as those of the upper or breast portion of the figure.

[4a] The seal impressions from M. I. vii. 003, 004 have, through inadvertence, I regret, been reproduced upside down in Pl. LI.

[5] Cf. e.g., Von Le Coq in *S.B.A.W.*, xix, 1908, p. 1202 ; also *Ancient Khotan*, i. pp. 71 sq., 87.

M. I. iv. 0027 (Plate L); xiv. 0073; xx–xxi. 004 are specimens, suggest that fishing in the stream of Mīrān was once a more productive pursuit than it possibly could be at present, or else that lagoons formed by the dying Tārīm, corresponding to the present Kara-koshun marshes, approached nearer to the site than they do now. The bone plectrum, M. I. iv. 0026, and the wooden bridge of a musical instrument, M. I. viii. 0013 (cf. for both Appendix *H*), prove that the occupants of the dreary post were no strangers to the solace of music. That other amenities of life were not altogether missing in these crowded, filth-surrounded quarters is suggested by the fragments of wooden trays, bowls, and boxes decorated in lacquer (M. I. ii. 0029, 0039; iv. 0030; viii. 0014; xxi. 001). But the piece of a gourd-vessel repaired with felt, M. I. ii. 0038 (Plate LI), plainly tells of a penurious existence, and an exceedingly filthy pigtail of coarsely-strung black hair found in M. I. iv did not look as if its quondam owner had troubled to use the combs of wood and horn of which we recovered a fair number (M. 0017; I. i. 004, 0011, 0014; iii. 003; iv. 0028–29). Three wooden keys found, M. I. 0090 (Plate LI); viii. 005, 007, attest the continuance of a type already met with at Khādalik and elsewhere in the Khotan region.[6]

Abundance of fabric remains.

But the most abundant class of relics, apart from written records, are pieces of coarse fabrics, mostly of wool, but some also of cotton and felt, which must mainly have belonged to the soldiers' personal outfit. The variety of texture is considerable in these fabrics, as shown by the specimens reproduced in Plate XLVIII. But all are woven strongly and skilfully, and their colours are well preserved, dark browns and reds prevailing. It is significant that not a rag had found its way into the rubbish until it had become hopeless for use. The same is the case with the fragments of elaborately woven rugs of which a selection is reproduced in Plate XLIX. Among their patterns those of M. I. xxvi. 001, 002 are of special interest as introducing animal figures of conventional but bold design not met with in the corresponding relics brought to light at the earlier sites of Niya and Lou-lan. There is something to suggest a vigorous growth of textile art which, in a people largely nomadic, may well go with otherwise primitive industrial conditions, as is proved by observations at the present day among such tribes as the Kirghiz, Turkomans, and Balūchs. Materials of an unusual kind are M. I. iv. 0010 (Plate L) and xii. 007, well-woven gauzes of horsehair and cotton respectively, as analysed by Dr. Hanausek.

Rare silk textiles.

That torn pieces of silk were scarce among the refuse of the Mīrān fort, compared with those found at the ruins of Lou-lan and the Tun-huang Limes, is a clear indication of the extent to which trade with China suffered through the Tibetan conquest of the Tārīm Basin and the Kan-su borderlands in the last quarter of the eighth century A.D. Nevertheless, we meet among the few pieces with specimens of silk damask, M. I. 0094 (Plate CXXI); i. 009; ii. 0035; xii. 005, no doubt of Chinese origin, and also with a fragment of figured silk, M. I. viii. 0017 (Plate CXI), which is similar in style to the abundant specimens of figured silks recovered from the 'Thousand Buddhas' of Tun-huang. It also resembles in pattern a fragment of brocade, M.Tagh. a. iv. 00177, from the site of Mazār-tāgh, north of Khotan, which dates back to the same period of Tibetan occupation.[6a]

Remains of embroidery, etc.

In M. I. xxvii. 001 we have a square of thick silk brocade with a delicate pattern of Chinese type, sewn up into a small triangular pouch. The larger bag, M. I. xxvii. 009, is made up of fine woollen material, with a striped design in rich colours. Better preserved than either of these is the bag of red silk, M. 0019 (Plate CX), embroidered in an elaborate chain-stitch design, which covers almost the whole of the background. The style curiously recalls the modern embroidery work of Eastern Turkestān. Of other made-up textile articles I may briefly mention the well-preserved felt pouch, M. I. xiii. 001. a (Plate L), which might have formed part of a soldier's equipment; the leather pouch M. I. 0076 (Plate L), and the quilted cloth shoe, M. I. ii. 0025 (Plate L), covered with

[6] See above, pp. 191 sq.; also below, chap. XXX. sec. iii.

[6a] See below, chap. XXXII. sec. i.

an elaborate stitched pattern and an embroidered design of palmate leaves. Finally, passing reference may be made to some painted fragments, M. I. xix. 005, of uncertain use. Their material, birch bark, is of interest, as it manifestly points to Indian origin.

Section V.—TIBETAN DOCUMENTS FROM THE MĪRĀN FORT

Character of Tibetan records.

The abundance of the Tibetan written records recovered from the refuse-heaps of the Mīrān fort seemed at the time an encouraging recompense for the trying physical conditions under which their clearing was effected. But even while first handling the dirt-encrusted documents, or trying to clean them with half-benumbed fingers at night in my little tent, I could not fail to foresee to some extent the difficulties which there would be in interpreting them later on. Quite apart from the fragmentary state of the great majority of the wooden slips and papers, and the effaced surface and cursive script in many of them, these difficulties were bound to be serious. Wholly unversed as I am in matters Tibetan, I knew that Tibetan literature, while abounding in Buddhist texts and other works of a devotional character, possesses but very few specimens of early secular writing. Yet from the first it was obvious that the great mass of the Tibetan records from Mīrān would prove to consist of miscellaneous 'office papers', more often than not of a petty kind, reports, applications, indents, and the like, all probably couched in the language of everyday life.

Dr. Francke examines documents.

It was clear that for the full elucidation of documents of this kind philological acumen would be needed, combined with intimate knowledge of the living language and the ways of Tibet. I had therefore reason to feel specially gratified when, in 1910, the Rev. Dr. A. H. Francke, late of the Moravian Mission, Leh, the recognized authority on the antiquities and the living language of Western Tibet, kindly agreed to undertake the examination of the Tibetan manuscript materials in my collection, as far as they comprise the finds made at Mīrān and the approximately contemporary site of Mazār-tāgh. But obligations arising from recent archaeological tours of his own, and practical considerations connected with the great number of the documents, made it necessary for Dr. Francke to limit his collaboration, as far as the present publication is concerned, to the preparation of a complete inventory of the above materials.[1] To this important contribution Dr. Francke was at my request kind enough to add, in 1913, very valuable notes of a general kind, dealing succinctly with the main results of his preliminary scrutiny of the documents in their various aspects, philological and antiquarian, and to publish them for preliminary information in the *Journal* of the Royal Asiatic Society.[1a]

Dr. Francke's inventory and notes.

A reference to the Mīrān portion of Dr. Francke's inventory will show on how many points of direct archaeological and historical interest fresh light may yet be expected from a detailed analysis of these documents, and especially of the better-preserved ones among them. It had been my hope to secure from this most competent scholar translations or at least fuller extracts of those particular records and letters which, judging from the entries in the inventory, hold out promise of information likely to be of use for elucidating local antiquarian questions, or else capable of being itself illuminated by actual archaeological observations and finds. But this hope has been necessarily frustrated by conditions arising from the war.

It is due to the same cause that I am not even able at present to gain access to the summary notes which Dr. Francke and another learned collaborator, Dr. F. W. Thomas, Librarian of the

[1] [It had been originally intended to reproduce this inventory in Appendix *G* of the present work. But a variety of considerations has rendered this course impracticable. It was decided instead to deposit the original catalogue slips of this inventory, as well as a set of type-written copies, in the India Office Library, where they will be conveniently accessible for reference and further research.]

[1a] See *Notes on Sir Aurel Stein's collection of Tibetan documents from Chinese Turkestan*, *J.R.A.S.*, 1914, pp. 37–59; also below, Appendix *G*.

India Office, had, in 1910, been kind enough to place at my disposal concerning a few of such documents, and which I was very glad to be allowed to utilize for some comments on the Mīrān records in my personal narrative.[2] It is impossible at present to ascertain to what extent the contents of these, avowedly provisional, notes have been confirmed by Dr. Francke's subsequent closer examination of the materials. It appears, therefore, to me a critically safer course to reproduce, for convenient reference, only Dr. Francke's above-quoted later notes.[2a] In them no distinction is made between data from the Mīrān documents and from those found at Mazār-tāgh.[2b] But this circumstance is of less consequence than might appear at first sight; for in both cases the ruined forts which have furnished the written remains can, by independent archaeological evidence, be proved to belong to the same period and to have served a similar purpose as Tibetan frontier posts. The system of common treatment which Dr. Francke has adopted is the best proof that neither in language nor in contents do the records obtained from the two sites show any appreciable difference of type.

Name *Nob* for Lop territory.

Dr. Francke's notes show the wide range of the philological and antiquarian interest attaching to the documents recovered from the Mīrān fort, and also the great number of the questions needing thorough investigation by scholars to whom these records are accessible in their Tibetan original. Want of this qualification precludes me from making any general attempt to elucidate here even such points as have an immediate bearing on the antiquities and historical geography of the region which formed the scene of my explorations. But an exception must be made in the case of the Tibetan designations which these documents have revealed for the site of Mīrān itself and the territory comprising it. In a preceding chapter, I have already given the reasons which have led me to recognize in the local name *Nob*, so often occurring in these documents, an earlier form of our familiar *Lop* and a phonetic link between it and Hsüan-tsang's *Na-fu-po*.[3] It remains, however, to furnish documentary evidence, with the help of Dr. Francke's inventory, as to the use of the term and the particular application of the forms 'Little Nob' and 'Great Nob' in which it is most frequently found.

Little Nob mentioned in records.

It is a significant fact that whereas the simple *Nob* is found only in three wooden slips, all fragmentary (M. I. ii. 28; xiv. 0043; xxi. 10), 'Little Nob' (*Nob-chung*) is mentioned in no less than thirty documents, and 'Great Nob' (*Nob-chen*) in fourteen.[4] In addition, both Great and Little Nob combined are referred to in five records (M. I. vii. 27; xix. 002; xxviii. 002; xliv. 2, 0013). Among the documents mentioning Little Nob, a fair number seem to justify the conclusion that the locality meant is identical with the one where the documents were actually found, i. e. the Mīrān Site. Thus M. I. vii. 76, 99 are wooden slips briefly referring to a communication which is to be delivered, probably orally through the bearer, to the *rTse-rje* (an official) of Little Nob,[5] and of similar purport is the address on the slip M. I. xxvi. 13. Particularly convincing seems the evidence furnished by the letter on paper M. I. xxvii. 18 (Plate CLXX), which is also addressed to the 'rTse-rje of Little Nob' and conveys the requests of a man dangerously sick concerning himself and the disposal of his property. Importance may be attached also to M. I. xxxii. 13, in which two high officers communicate news of a conquest to the 'rTse-rje and the others at Little Nob'. M. I. iv. 138,

[2] Cf. *Desert Cathay*, i. pp. 447 sq.

[2a] See below, Appendix *G*. In this all passages dealing with points of purely philological interest have been omitted.

[2b] For the Mazār-tāgh site, cf. below, chap. XXXII. sec. i.

[3] See above, pp. 321 sq.

[4] We read of 'Little Nob' in M. I. i. 13, 14, 27; ii. 005; iii. 7; iv. 3, 93. b, 132, 138; vii. 76, 99; viii. 49, 63. b; x. 7; xiv. 77, 108. d, 0027; xix. 9, 001; xxi. 9; xxvi. 13; xxvii. 18; xxviii. 0036; xxxii. 13; xl. 001; xlii. 1; xliv. 6, 7, 109, 005. 'Great Nob' is mentioned in I. 0028; iv. 101, 106; vii. 30, 32; viii. 18; ix. 10; x. 2, 3, 6; xiii. 12; xiv. 62. b; xvi. 22; xliv. 4.

[5] Cf., regarding this official designation, Dr. Francke's remark in Appendix *G*.

a fragmentary communication on wood, is similarly addressed to certain persons at Little Nob. In M. I. i. 13, 14, both letters on wood, the writer expresses a hope of coming to Little Nob at a certain season. M. I. xix. 001 (Plate CLXXI), a complete letter on wood, treats of a man who has been punished and who 'is now in Little Nob'.

Little Nob probably name of Mīrān.

In the case of M. I. xliv. 7 (Plate CLXX), which is a complete judicial record on paper dealing with the sale of a certain slave, it seems reasonable to assume that 'the court of Little Nob', the proceedings of which it records, was the local one of the site. The same holds good also of the complete paper document M. I. iv. 93. b, which records a division of the principal fields of Little Nob. It is of particular interest here to find a reference to 'charts of the fields' and the statement that 'whosoever breaks the agreement is to be prosecuted according to the "old law of the former (or first) castle"'; for if our identification of Little Nob with Mīrān is right, we should be strongly tempted to recognize in 'the former castle' a Tibetan rendering of the traditional designation 'the old [eastern] town', which according to the testimony of Li Tao-yüan, the early commentator of the *Shui ching*, was borne by Yü-ni, the old capital of Shan-shan. As I have already shown above, there are strong reasons for locating Yü-ni at the site of Mīrān.[6]

The remaining records in which the name of Little Nob occurs do not, as far as can be judged from Dr. Francke's abstracts, furnish any definite evidence of its location. There is, however, one, the wooden document M. I. viii. 63. b, which at first sight seems opposed to the identification of Little Nob with Mīrān. It claims to be written by a certain person 'in reply to a letter sent to *Nob-chungu* by minister dPal-sum' and to be concerned with the proper payment of salaries in kind. But there is a possibility that this wooden tablet is merely a draft and not the reply itself, and in support of such a conjecture it may be pointed out that, though the document at its end mentions several seals of witnesses, no such seals are to be found on it. Indecisive as the other documents referring to Little Nob are, yet it should be noted that three of them, M. I. iv. 132; x. 7; xliv. 005, mention the castle of Little Nob, and thus prove the locality to have been guarded by a Tibetan post.

Great Nob located at Charkhlik.

From what I have already explained about the importance which physical advantages must at all periods have assured to Charkhlik as the chief cultivable area of Lop territory,[7] it follows that, if the location of Little Nob at Mīrān is right, Great Nob must necessarily be identified with the present oasis of Charkhlik. All of the fourteen documents quoted above in which Great Nob is referred to are consistent with this identification. But only two can be said to give support to it, and that indirectly. M. I. vii. 30 is a wooden slip addressed by the rTse-rje of Great Nob (*Nob-ched*) to Klu-bzang, designated as in charge of Inner Affairs. Obviously, it is simplest to assume that the place where it was written was Charkhlik and not Mīrān, where it was discovered. In M. I. xiii. 12, a complete letter on paper, we read of an annual tribute in soda sent by an official of Great Nob as distinct 'from our own tribute'. M. I. xliv. 4 mentions a castle at Great Nob, too, as well as fields, and a division of the latter is referred to in M. I. iv. 106.

'Three castles of Nob.'

It can scarcely be doubted that the castles of Great Nob and Little Nob were counted among the 'Three castles of Nob' which are spoken of in the complete paper document, M. I. ii. 40 (Plate CLXXI shows it in its neat original folding), and in the fragmentary wooden one, M. I. viii. 10. It is possible that the expression 'Three castles of Nob' was used in a general way for the Lop territory as a whole, and the last-named record refers subsequently to 'the various territories of the castles'. The locality of the third castle is nowhere distinctly indicated, but it is certainly noteworthy that the name Nob is met with in the designation of a third place, *Nob-shod* or 'Lower Nob'. The two paper records, M. I. xiv. 108. f; xxx. 8, in which this occurs, do not help us to define its position more clearly. In two documents on wood, M. I. i. 12;

[6] See above, pp. 326 sq., 333.

[7] Cf. above, pp. 311 sqq.

iv. 89. a, we read of a 'lord' or 'superior of the four castles'. But there is nothing to show that the 'three castles of Nob' were included among them, and the mention made in M. I. xiv. 109 of Little Nob side by side with the 'four castles' seems opposed to it.

Other local names in records.

As the affairs of which the abstracts of the documents mostly tell us seem of a petty nature, it can safely be assumed that the majority of the places they name must be looked for within, or close to, the Lop region. But owing to the strange Tibetan garb in which these local names are presented, and the uncertainty as to the phonetic value intended by apparent transcriptions of non-Tibetan names, conjectural attempts at identification must be hazardous at present. Only in one case is the similarity of forms sufficiently close to justify here a tentative suggestion, viz. in that of the name *Cer-cen*, M. I. xxviii. 2, which, if really intended for a locality, could obviously be taken to apply to the present Charchan.[8] The impossibility of identifying any other of the abundant local names is particularly to be regretted in those unfortunately rare instances where the documents, even in the mere excerpts now available, seem to present us with glimpses of true colour in the local background. Thus in M. I. xxviii. 005 the writer reports 'that he had travelled to *Byeu-ling*', apparently with a caravan, and 'that they were belated and in extreme want of water'. There is no clue to the identification of Byeu-ling, which is mentioned elsewhere, too, e.g. in M. I. xxvii. 19; xxxi. 001. But the situation curiously suggests an experience such as nowadays might befall a caravan which attempted the route through the desert to Tun-huang too late in the season, when the melting of the ice at the salt springs south of the dried-up Lop sea would cause serious trouble about the supply of drinkable water. In another letter, M. I. i. 41, which mentions *Shod-brog* ('lower Brog'), we find a somewhat similar report from a party evidently in great straits through want of the necessaries of life.

Reference to military affairs.

The impossibility of identifying the localities referred to makes itself particularly felt in the case of those records which, like, e.g., M. I. iv. 4, 71; vii. 001; x. 3; xxi. 9; xxiii. 009, treat of military affairs. It is regrettable, too, that we cannot define the frontiers referred to in documents like M. I. xiv. 7, or the posts occupied by the *so-pa* or frontier-guards.[9] But even a cursory examination of the abstracts furnished of all these Tibetan records makes it clear that most of them refer to the multifarious petty affairs of the small Tibetan garrisons in the occupied territory and the civil administration of its little oases.

Tibetan administration.

The very limitations which the petty nature of these records implies as regards the functions and resources of the Tibetan officials mentioned in them must warn us not to attach undue importance to the high-sounding titles under which so many of them figure. In all probability these 'ministers', 'lords', etc., held positions of small power and extent. At the same time, if the affairs of which the Mīrān documents give us glimpses were by themselves of very modest consequence, considerable historical interest attaches to the political conditions revealed by the records as a whole. They clearly prove that in the Lop tract the Tibetans maintained not merely military posts, but also an effective civil administration, during the period to which the occupation of the Mīrān fort and probably also its construction belong. This was possible only in the period of general Tibetan predominance in the Tārīm Basin, of which we know, scanty as our historical sources are, that it extended from the decay and ultimate downfall of Chinese power in the last third of the eighth century A.D. to about the middle of the ninth century.[10]

[8] Cf. above, p. 323.

[9] See Dr. Francke's remarks in Appendix *G*.

[10] Cf. *Ancient Khotan*, i. p. 65; M. Grenard's paper in *Journal Asiat.*, 1900, Jan.–Févr. pp. 24 sqq.; below, chap. XXI. sec. ii. The data furnished by the Chinese historical records concerning the events which, between the years A.D. 766–90, led to Chinese political control over Eastern Turkestān being completely supplanted by the Tibetan power have been lucidly set forth by M. Chavannes in *Ancient Khotan*, i. pp. 533 sqq.

Absence of Chinese records at Mīrān.

The evidence afforded by the Mīrān documents as to the character and extent of the Tibetan occupation is of special value for us, because that epoch in the history of Eastern Turkestān is one about which our information is exceptionally scanty. This obscurity is a direct result of the total severance of political relations with the Chinese empire which was brought about by the Tibetan conquest of the Tārīm Basin and the regions adjoining it on the east. This wedge-like intrusion of the Tibetan power caused Central-Asian affairs to disappear from the records of the Chinese Annalists for more than a century. The thoroughness and far-reaching effects of this great political change are proved by the significant fact that among all the abundance of written pieces which had found a safe refuge in the refuse-heaps of the Mīrān fort, I failed to bring to light a single scrap of Chinese writing.

Section VI.—A RECORD IN RUNIC TURKISH SCRIPT

Discovery of Runic Turkish document.

The thorough change resulting from the Tibetan conquest must invest with additional interest the discovery of the only non-Tibetan record which my excavations in the ruined fort yielded. It was made in the small apartment M. I. xxxii, which, owing to the effects of wind-erosion, had retained its thin brick walls and the refuse accumulated between them only to a height of about two feet. There, close to the floor and in immediate proximity to a dozen or so of scattered Tibetan records on paper and wood, was found a crumpled-up packet of coarse brownish paper which, when opened out, proved to be a large and fairly well preserved sheet, about one foot square, and two torn pieces of smaller size and inferior condition, M. I. xxxii. 006. a–c (Plate CLIX). In the large quasi-lapidary writing which covered the obverse, and in piece *b* also the reverse, I recognized at once the Turkish 'Runic' script, which first became known to scholars in those oldest monuments of the Turkish language, the bilingual inscriptions of the early eighth century A.D., discovered on the Orkhon and Yenissei Rivers. It is a source of special gratification to me that Professor Vilhelm Thomsen, the first decipherer of those famous inscriptions from Mongolia and Siberia, was kind enough to undertake the publication and interpretation of the Mīrān documents as well as of my subsequent finds in Turkish 'Runic' script. It is wholly on the paper in which Professor V. Thomsen has discussed hese finds[1] that the following observations concerning their contents and import are based.

Persons named in passports.

Professor Thomsen believes that 'we here have the fragments of a register or lists of persons who may be presumed to have been either in the act of leaving the fort after having stayed there, or of having only passed by it in the one or the other direction, and to whom a kind of passport had been granted or assistance given for their further journey'. His translation shows that the numerous names mentioned are all Turkish, and apparently most of them belong to military persons. It is in more than one way interesting to note that 'several of them are known from elsewhere, especially from Mongolia and Siberia; but in addition to this, many new contributions are added to our knowledge of the Old-Turkish manner of naming'. If we turn, in Professor Thomsen's translation, to the statements recorded about the three dozen or so of persons individually named, we see that they concern mainly either the issue to them of a *yarlïg* or the provision of a *yarïq*.

Meaning of *yarlïg*.

In the case of the former term we are on safe ground, since the Turkish *yarlïg* is otherwise known as a close equivalent of the Persian *farmān*, in the sense of 'an open letter which serves as a passport or introduction to other authorities'. The custom of issuing such warrants (known in

[1] See V. Thomsen, *Dr. M. A. Stein's manuscripts in Turkish 'Runic' script from Miran and Tun-huang, J.R.A.S.*, 1912, pp. 181 sqq.

modern India as *parwāna*, in Persia as *rāhdārī*, in Chinese Turkestān as *yol-khat*) to travellers, official messengers, etc., still prevails in all eastern countries, and has become personally familiar to me from my travels. Many of the documents which I have found at ruined sites of the Khotan region and elsewhere in Chinese, Kharoṣṭhī, 'Khotanese', etc., undoubtedly are of this nature.[2]

The term *yarïq*.

Yarïq, on the other hand, is a hitherto unknown word. But apart from the etymological derivation pointed out by Professor Thomsen (from the verbal root *yar-*, in the literal sense of 'one who is detached'), there appears to be sufficient indication in the entries themselves to support the great Danish scholar's conjectural inference that *yarïq* is used here 'to designate an officer (?) dispatched for a special purpose by another and superior officer' or, in other entries, 'a military personage provided as an escort'. In fact, long practical experience of the realities of Eastern administration and travel makes me strongly inclined to believe that the functions here indicated by Professor Thomsen are just those which that humble but omnipresent subordinate of every Oriental régime, the *Chaprassī* or 'orderly' of modern India, the *Darōgha*, also known by a Chinese term as *Ya-yeh*, of Chinese Turkestan, the *Ghulām* of Persia, would indifferently be called upon to perform in the regular course of official routine.

Approximate dating of record.

It is not necessary for me to analyse the contents of this Old-Turkish record in detail and to show how well the above interpretation of the two most frequently recurring terms agrees with them. But there are to be found in them other terms and names which must claim our attention here because they have a distinct bearing on the origin and date of these Mīrān documents, and are therefore of historical and archaeological interest. Professor Thomsen, when discussing the question as to the age of the manuscript,[3] has already pointed out that the date given in the first line of the large sheet *a* mentions merely 'the fourth month, the twenty-ninth [day]' and gives no information as to the year. At the same time, he has emphasized the chronological importance of the fact that the document, which was evidently 'written by a Turkish clerk who held an appointment at a Turkish or essentially Turkish garrison', refers to several persons by 'Chinese titles (and names ?), such as *Sangun*, *Chigshi*, etc.'[4] From the use of these titles he infers that the fort and the country were then under Chinese rule. As 'on the other hand there appears to be no trace whatever of Tibetan in the MS.', the conclusion is drawn that it cannot be later than the middle of the eighth century A. D., the approximate time when the Tibetans are likely to have established themselves here. 'If anything, it is perhaps of somewhat earlier date, and the form of the letters as well as the texture of the paper corresponds fairly well with this supposition.'

Titles of Chinese origin.

I doubt whether the use of those titles of Chinese origin can by itself be recognized as a certain proof that the fort and country must then have necessarily been under Chinese rule; for such effects of that close and constant political control which the Chinese succeeded in establishing over both the Northern and the Western Turks in the second quarter of the sixth century A. D., and which enabled the T'ang emperors to maintain their hold over Eastern Turkestān for more than a century,[5] might well, in conjunction with the powerful influence exercised by Chinese civilization, have outlasted for some time actual Chinese dominion in those regions. But I believe that Professor Thomsen's approximate dating finds distinct support in other indications furnished by the Mīrān documents.

[2] Cf. e.g. the Chinese slips from the Niya Site translated by M. Chavannes, *Ancient Khotan*, i. pp. 541 sqq.

[3] See *J.R.A.S.*, 1912, p. 185; below, pp. 473 sq.

[4] Thus we have mentioned in *a* the *Yarïqs* Urungu Tudun Chigshi and Chik Bilgä Chigshi, also one Kül Chigshi. In *a* the title *Sangun* is found in the designations of three persons, Äd[ch ?]ü Sangun, Tirä Bars Khan Sangun, and Urungu Sangun; in *b* recto we read of Külüg Sangun and Küräbir Urungu Sangun, also in *b* verso of Ut Sangun and one [.]ärkin Sangun Tir[–].

[5] Cf. M. Chavannes' masterly résumé of Chinese relations with the different Turkish nations during the seventh and eighth centuries in chapters VI–IX of his *Documents sur les Turcs occidentaux*, pp. 259–99.

In the first place, I think, importance must be claimed for the entry which mentions a number of '*yariqs* arrived from the town of Sugchu'.[6] This town, as Professor Thomsen has duly recognized, is undoubtedly the present *Su-chou*, the well-known and important town of Kan-su within the westernmost bend of the later Great Wall. Marco Polo's *Succiu* preserves, just as *Sugchu* does, the older pronunciation of the first syllable *su*, which was *suk*.[7] Now the Chinese historical records, as shown by M. Chavannes' extracts and analysis, make it perfectly clear that from about A.D. 756–8 the Tibetans gradually overran the whole of Kan-su, and that after A.D. 766, when they had finally established themselves there, they completely stopped all intercourse between China and those portions of Eastern Turkestān where Chinese garrisons were still holding out against Tibetan invasion.[8] From that date onwards no Turkish soldiers are likely to have come from Su-chou to Lop.

Mention of *Sugchu*, i.e. Su-chou.

As to the tribal or national affinity of these men we receive valuable evidence from the statement immediately following in the list that of those *yariqs* from Sugchu 'there were [given] six *yariqs* to the Bayirqus'. The Bayirqus, as pointed out in Professor Thomsen's note, 'were a Turkish tribe nearly related to the Uigurs and living north of the great desert'. The extracts concerning the Uigurs or Hui-ho, which M. Chavannes has translated from the *T'ang shu* and fully annotated, in fact enumerate the Bayirqus or *Pa-yeh-ku* among the different tribes composing the Uigur nation.[9] They are also mentioned in certain of the 'Runic' Turkish inscriptions from Orkhon which Professor Thomsen first deciphered.[10] Evidently the men in question were detached to a party of Uigurs.

Tribe of *Bayirqus*.

Now from the interesting Chinese records which relate the events immediately preceding the final downfall of the T'ang dominion in Eastern Turkestān, and which M. Chavannes has rendered accessible to research,[11] we see clearly that throughout the struggles by which the Chinese political officers and commandants of the garrisons north and south of the T'ien-shan, though cut off from the empire since about A.D. 766, maintained themselves for close on twenty-five years longer against the invading Tibetans, the Uigurs fought with them as allies. Their tribal settlements then reached close to Pei-t'ing, in the vicinity of the present Guchen and north of the Turfān depression. In this connexion it should be noticed here that among the entries in sheet *b* of the Mīrān record there is one concerning a *yarlïg* given to a certain Küräbir Urungu Sangun for going to the town of *Qochu*. This corresponds, as Professor Thomsen points out, to Kao-ch'ang, the capital of Turfān in T'ang times, and now represented by the ruins of Kara-khōja.[12]

Uigurs as allies of Chinese

It is to the period immediately preceding that isolation of the Chinese garrisons in the protectorates of An-hsi (Kuchā) and Pei-t'ing that I should be inclined to assign the probable date of our Old-Turkish record from Mīrān. We know that the Tibetans, who had temporarily made themselves masters of the Tārīm Basin between A.D. 670–92, continued from about A.D. 717 onwards to threaten the 'Four Garrisons' by repeated aggressions from the south.[13] Throughout

Probable date of Old Turkish record.

[6] See the text of *a*, l. 14, *J.R.A.S.*, 1912, pp. 186, 188.

[7] Cf. Yule, *Marco Polo*[3], i. pp. 217 sq. As Sir Henry Yule points out, the name was still recorded as Suk-chū by Rashīd-ud-dīn and Shāh Rukh's ambassador. For an account of Su-chou see below, chap. XXVII. sec. iii.

[8] Cf. M. Chavannes' remarks, *Ancient Khotan*, i. pp. 534 sqq., especially p. 534, note 2.

[9] Cf. Chavannes, *Turcs occid.*, pp. 88 sq.

[10] See Thomsen, *Inscriptions de l'Orkhon déchiffrées*, p. 109 (I take this reference from Chavannes, *loc. cit.*)

[11] Cf. M. Chavannes' extracts, *Ancient Khotan*, i. pp. 534 sqq.

[12] Cf. *J.R.A.S.*, 1912, p. 187, l. 11 of text *b*, recto. In the translation the mention of the town of Qochu has been omitted by an oversight; but see note, *ibid.*, p. 189.

[13] For a summary account of this period in the history of Eastern Turkestān, *Ancient Khotan*, i. pp. 61 sqq. may conveniently be consulted. There full references have been given to M. Chavannes' extracts from the T'ang Annals and other Chinese texts upon which our knowledge of those events is mainly based.

the efforts which the Chinese made during the reign of the Emperor Hsüan-tsung (A.D. 713–62) to defend their Central-Asian dominion against the attacks of the Arabs from the west and of the Tibetans from the south, our Chinese historical sources show that Chinese statecraft relied greatly on the help of the various Turkish tribes over which their political control extended. Among these tribes employed as auxiliaries we find repeated mention of the Karluks, of whom we know that they had become attached to the Uigurs.[14] Yet it is significant that when towards A.D. 790 the Tibetans succeeded in capturing Pei-t'ing, Karluks with some other Turkish tribes are mentioned among those who helped them in reducing this last foothold of Chinese power north of the T'ien-shan.[15]

Uncertain origin of document.

It is impossible for us to determine with any certainty to what circumstance the presence of this single Turkish document at the Mīrān fort, among the thousand odd Tibetan pieces, is due. It may be the solitary relic of a success which brought a detachment of Turkish auxiliaries employed by the Chinese into temporary occupation of a fort previously established and garrisoned by the Tibetans and subsequently retaken. Or the Runic Turkish record may not have originated at Mīrān at all, but may have been brought there from some post, possibly about Tun-huang or An-hsi, which those Turks were still holding for the Chinese. Instead of discussing such explanations, which for the present must remain purely conjectural, it will be more useful to emphasize what the archaeological indications furnished by the ruined fort teach us. They all combine to prove that it was built and tenanted during the Tibetan domination, which began in the second half of the eighth century A.D. and came to a close about a hundred years later.

Tibetan origin of fort.

The irregular plan and construction of the fort, as well as the total absence of any Chinese records, are strongly opposed to the assumption that it could date back to a period when Chinese political control and cultural influence still asserted themselves in the Lop tract. The amount and uniform character of the Tibetan records, and of the refuse-heaps, too, in which they were embedded, conclusively prove a long occupation by Tibetan soldiers and officials. It is equally important that of the nine copper coins found at or near the fort all but two show the type with the legend *K'ai-yüan t'ung pao*, introduced by the first T'ang Emperor Kao-tsu (A.D. 618–27) and continued by his successors for more than a century. Of the remaining two coins, one shows the *nien-hao* Chêng-ho (A.D. 1111–17) and the other the modern regnal name Kuang Hsü of the late Manchu Emperor (1875–1908). Both were found on the surface in the central area of the fort, having been dropped there by some visitor to the ruin. Finally, it must be recorded that neither in nor around the Mīrān fort could I trace any evidence that the site was inhabited in any permanent fashion during the rule of the Uigurs, who about A.D. 860 supplanted the Tibetans as the predominant power in the Tārīm Basin, or during the succeeding Muhammadan period.

Fort abandoned after Tibetan occupation.

Thus everything points to a rapid abandonment of the site soon after the Tibetan occupation. There is certainly no obvious reason for attributing this abandonment to the effects of desiccation, i.e. to failure of the water-supply, whatever changes progressive desiccation may have since worked on this ground in the course of many centuries. Even now the river, passing in its present bed within three miles to the west of the ruined fort, carries water sufficient for the irrigation of such an area of cultivation as would supply the food necessary for whatever garrison the small fort can have held and for a commensurate agricultural settlement.[16] Whether the same statement would

[14] Cf. Chavannes, *Turcs occid.*, p. 142, note 2; p. 297; also *ibid.*, pp. 94, 286.

[15] See M. Chavannes' extracts, *Ancient Khotan*, i. p. 536.

[16] During both my longer stays at Mīrān in the winters of 1907 and 1914 the river was hard frozen, and all the water that was reaching its bed there was spreading itself in a wide ice sheet, as explained in *Desert Cathay*, i. p. 438. Hence I was unable to take any measurements then of the volume of water carried by the Mīrān River. Nor would the volume which I might have ascertained in December 1906 have furnished any real guidance as to its irrigation capabilities; for the Jahān-sai, as the river is known higher up where it debouches from the mountains, is fed mainly by the permanent snow and ice of the high Chimen-tāgh, and its supply of

hold good as regards the earlier and far more important phase of occupation which is proved for the site of Mīrān by the remains to be described further on, is a question that need not concern us here. But in order to understand the complete state of abandonment into which Mīrān appears to have fallen after the Tibetans left it, it is enough to remember the geographical facts which rendered the position so important for them and for them only.

Strategic importance of Mīrān.

As a reference to the map shows, the Tibetans at Mīrān were guarding a point of the greatest strategic importance for them. This little oasis forms the key to the direct route which leads, from the southern oases of the Tārīm Basin and the border lands of Īrān and India beyond them, to Tun-huang and Kan-su. At Achchik-bulak or Donglik (Map No. 61), a short march to the east of Mīrān, this route bifurcates into two tracks. Both pass eastwards, one along the southern shore of the great dried-up salt lake of Lop, and the other along the northernmost range of the Āltin-tāgh, to meet each other again at Tun-huang. Like the ancient Chinese 'route of the centre', which we have so often had to refer to above, and which once passed through Lou-lan, this southern route was a main line of communication into China from the last centuries B.C. onwards, and its importance must have greatly increased after the Lou-lan settlements were abandoned about the fourth century A.D., and want of water permanently closed the ancient 'central route'.

water from springs, the only one available during the late autumn and winter, is very limited. Fortunately on my second visit in 1914 I found the Lopliks of Abdal, who previously carried on cultivation at Mīrān in a spasmodic fashion, settled in a little hamlet of newly-built permanent homesteads near their fields, and the cultivated area considerably enlarged.

The change brought about by this settlement of the Abdal Lopliks, who until a generation or two ago were all fishermen and shepherds, was striking in many ways. It also made it easier for me to obtain reliable information as to the agricultural resources and possibilities of the place. I found that the total number of cultivating families exceeded two dozen. But it was acknowledged that the labour they could provide was quite inadequate for bringing under cultivation all the fertile land which the available water-supply would permit to be irrigated.

According to the statements then made to me by Nūr Muḥammad, the old Bēg of Abdal, and his intelligent son Niāz Bēg, the volume of water which reaches the Mīrān colony at the season when the river carries only spring water (*kara-su*) and is at its lowest, i.e. during the autumn and late spring, is estimated at 3 *tāsh* or 'stones'. This measure, based upon the volume of water needed to turn a millstone, would correspond, according to the average of the rough estimates ascertained elsewhere in the oases of Eastern Turkestān, approximately to a discharge of 90 cubic feet per second. This volume was declared to increase temporarily to about 15 *tāsh* at the time of the early spring sowing towards the close of February and in March, when the ice in the river-bed and the snow in the lower mountains melt and, as in other rivers draining the north slopes of the K'un-lun, cause a short-lived flood. Subsequently the supply diminishes again until the big summer flood arrives late in June, when the snow and ice on the high ranges begin to melt and the volume of water in the river vastly exceeds all possible irrigation requirements, just as it does in the rivers of Khotan, Keriya, etc.

The Lopliks now settled at Mīrān and claiming possession of all cultivable land there are, for a variety of obvious reasons, anxious to prevent that influx of new colonists from the chief centres of cultivation westwards which has enabled the Chinese administration to create and develop the relatively important oasis of Charkhlik within the last two generations (see above, p. 312). Hence I have no reason to assume that the above statements as to their irrigation resources are likely to be greatly exaggerated. I am confirmed in this view by the independent and reliable testimony which my faithful old follower of three journeys, Ibrāhīm Bēg of Keriya, was luckily able to furnish. He had, in addition to the visits paid while with me, made a prolonged stay at Mīrān in April–May, 1908, when he accompanied Naik Rām Singh on his ill-fated mission there. Being a landowner himself and specially experienced in irrigation matters—for a considerable number of years before and after my second expedition he had held charge as 'Mīrāb Bēg' of the canals of the Chīra oasis, as recorded in *Desert Cathay*, i. p. 236—he had been naturally interested in the irrigation of Mīrān, and made his own inquiries on the subject. Ibrāhīm Bēg's view was that the water-supply available in the Mīrān River was not inferior to that of Charkhlik, and that, though the conditions of the ground owing to shifting beds, stony soil, etc., were less favourable for its use in canals than at Charkhlik, the irrigation resources of Mīrān, if utilized under labour conditions such as obtain at Chīra, would suffice for the needs of a colony counting some 500 households instead of the present two dozen. Whether they will ever be utilized to the full, and whether such a colony would succeed in coping with the difficulties which great changes in the bed of the river, as suggested by the map (see Map No. 57), might create, only the future can show.

Route leading to Lhassa.

But the examination of any modern map of Tibet reveals an even more cogent geographical fact which obliged the Tibetans to keep a firm hold upon Mīrān as long as their political and military ambition was turned towards Eastern Turkestān.[17] It is at this small oasis that the two most direct and practicable routes debouch which lead from Central Tibet and Lhassa into the Tārīm Basin. One of them, coming straight from Lhassa and still regularly followed by traders as well as pious northern pilgrims to the Tibetan capital, crosses the Chimen-tāgh and descends the valley of the Jahān-sai River. No other route across the high plateaus and ranges of the K'un-lun could have offered similar advantages for Tibetan inroads directed against the chief oases of the Tārīm Basin and the main Chinese line of communication which skirted the T'ien-shan.[18] The second of the two Tibet routes just referred to passes westernmost Tsaidam with its abundant grazing grounds, joins the hill road from Tun-huang at Bāsh-kurghān, and thence descends to Achchik-bulak and Mīrān (see Map No. 61). Thus a Tibetan garrison placed in the fort of Mīrān conveniently guarded both these routes, as well as those coming from Kan-su.[19]

Reason for abandonment.

But from the geographical facts just examined it is clear that a *point d'appui* established at the site of Mīrān would retain its special strategic value only so long as the Mīrān cross-roads had to be made secure for Tibetan forces having their base far away in the south. As soon as the Tibetan power had disappeared from the north of those great inhospitable mountain wastes which separate the Tārīm Basin from the inhabited parts of Tibet, Mīrān must rapidly have sunk into insignificance. For whatever traffic continued to pass along the ancient 'southern route' from Khotan and the other oases to Tun-huang and China during Uigur, early Muhammadan, and Mongol times, Charkhlik offered a more convenient and better supplied resting-place. Thus we can easily understand why there is no mention of Mīrān in Marco Polo's account, whose 'town of Lop', as we have seen, must be located at Charkhlik. The crumbling walls of the ruined fort looked down upon the Venetian's caravan as it passed on its way into the 'Desert of Lop', but, no doubt, they were then as silent and deserted as they are now.

Section VII.—DESCRIPTIVE LIST OF ANTIQUES FROM MĪRĀN FORT

MISCELLANEOUS OBJECTS FOUND WITHIN OR NEAR MĪRĀN FORT

M. 001. Specimen of grain, millet (?).

M. 007. Fr. of bronze plate with hole in corner; perhaps from scale armour. Picked up by Jasvant Singh, 30. i. 07. $1\frac{5}{8}'' \times 1\frac{1}{8}'' \times \frac{1}{32}''$.

M. 008. Bronze disc, slightly concave, with remains of stud at centre of back; a button. Picked up by Jasvant Singh, 30. i. 07. Diam. 1″, thickness *c.* $\frac{1}{32}''$.

[17] See e.g. the map of *Tibet and the surrounding regions* published by the R. Geographical Society, 1906 (second ed.).

[18] The other possible routes which lead from the Tibetan plateaus across the main K'un-lun range westwards, debouching by the valleys of the Charchan, Kara-muran, and Kara-sai Rivers, are longer and far more difficult. The one which descends the Polur gorge and offers the nearest approach to Khotan may, according to my experience in 1908, be considered as impracticable both for trade and troops.

[19] This military importance of Mīrān with regard to the routes descending from the Tibetan plateaus was strikingly brought home to me by a ruin of quite recent date. When I first visited the site on December 8, 1906, from my camp on the river bank, the caravan track which I followed eastwards led me, after about a mile, past a large roughly built structure of timber and reed walls, enclosed by a rude palisade and situated on a scrub-covered sandy steppe. It had been built about ten years before to serve as a shelter for a detachment of Chinese troops posted here to intercept a body of Tungan rebels who had fled from Hsi-ning to Tsaidam, and after suffering great privations and losses in the mountains were expected to debouch towards Lop-nōr. I subsequently in 1907 met the quondam commandant of this modern substitute for the Mīrān fort at Hāmi, and heard a graphic account of the hardships that he and his men had undergone during their long summer's detention here.

M. 009. Four-sided tapering fr. of iron, broken at ends and much corroded; arrow-head (?). Picked up by Jasvant Singh, 30. i. 07. Length $1\frac{3}{16}''$, gr. width $\frac{3}{8}''$.

M. 0010. Piece of bronze plate folded over twice. Found 2. ii. 07. $1\frac{3}{8}'' \times \frac{7}{16}''$, thickness (fourfold) *c.* $\frac{1}{8}''$.

M. 0011. Curved fr. of bronze, perhaps from bowl of spoon. Found 2. ii. 07. Length $1\frac{1}{2}''$, gr. width $\frac{9}{16}''$.

M. 0012. Flat oblong piece of white soap-stone, rounded one end, cut sq. the other. Found 2. ii. 07. Length $\frac{3}{4}''$, width $\frac{1}{4}''$ to $\frac{7}{16}''$.

M. 0013. a–b. Two beads. (*a*) Rough flattened spheroid of red cornelian. Diam. $\frac{5}{16}$. (*b*) Spheroid of glass paste, *millefiori*, green, yellow, and red. Diam. $\frac{5}{16}''$.

M. 0017. Fr. of horn comb; teeth and part of handle missing. Length $2\frac{1}{2}''$, h. $1\frac{1}{4}''$. Pl. XXXVI.

M. 0018. Strip of hard wood with hole pierced near one end. Use doubtful; thicker than ordinary writing slip. $9\frac{9}{16}'' \times \frac{1}{2}'' \times \frac{1}{4}''$.

M. 0019. Bag of red silk, finely corded weave, embroidered in dark and light blue, dark and light green, white, chocolate, pink, buff, and yellow, in close rows of chain-stitch. The design is apparently one of conventional plumage with eyes like those of peacock's feathers, and covers the background almost entirely. The whole has been cut from a large piece of embroidery, and has been folded double and stitched up the sides to make the bag; the top is not hemmed. There are in the embroidery about 30 stitches to the inch. $4'' \times 3''$. Pl. CX.

OBJECTS EXCAVATED IN TIBETAN FORT, M. I

M. I. 0056. Fr. of pottery, hand-made, of very ill-levigated clay fired very hard on an open hearth; surface red-brown, black in section. On outer surface, incised before firing, head of warrior wearing helmet, apparently of scale armour, with plume (broken) and cheek-piece. From mouth downwards broken away. Good free drawing of Chinese character; shows that manufacture of rude hand-made pottery was continued in periods of advanced civilization. $2\frac{5}{8}'' \times 1\frac{3}{4}''$. Pl. LI.

M. I. 0057. Wheat grains.

M. I. 0058. Fr. of thin bronze plate, cracked and full of holes, perhaps from armour. Found outside fort by Jasvant Singh. Gr. M. $2\frac{1}{2}''$, thickness *c.* $\frac{1}{64}''$.

M. I. 0059. Iron arrow-head, flat, of elongated-heart-shape; rudimentary rib; part of tang remains; condition bad. Found outside fort by Jasvant Singh. Length of whole $2\frac{3}{4}''$, of head $2''$, gr. width $1\frac{1}{4}''$. Pl. LI.

M. I. 0060. Wheat grains.

M. I. 0063. Fr. of large pottery vessel (see above, pp. 348 sq.), hand-made, of red clay fairly well levigated and very evenly fired. Shows part of straight band of five to six incised lines running round jar, with comb-drawn festoon bands of five lines above and below. Incision shallow and careless. Over it in one place is fig. deeply incised before firing, prob. a Tibetan char. and possibly a measure of capacity, but not identified. Gr. length $1'$, gr. width $5\frac{1}{2}''$.

M. I. 0064–0065. Two wooden writing slips, blank, charred at end. $5\frac{3}{4}''$ and $5'' \times \frac{7}{8}''$.

M. I. 0066. Wooden label (longitudinal half), blank. $3\frac{1}{16}'' \times \frac{5}{8}''$.

M. I. 0067. Flat piece of wood; one end cut to blunt point, near which is small hole; the other broken; $1\frac{1}{4}''$ from broken end are remains of notch. Handle of key. $3\frac{1}{2}'' \times 1\frac{1}{16}'' \times \frac{1}{4}''$ to $\frac{3}{8}''$.

M. I. 0068. Leather armour scale, oblong; for type see *Ancient Khotan*, i. pp. xvi, 374, 411. Lacquered inside red, and outside red with thin top layer of black. For lateral lacing, by one long side, hole at each end in extreme corner; by the other, two pairs of holes nearer middle. For vertical lacing, one pair of holes parallel to, and $\frac{1}{2}''$ from, one end. No thongs remain. Condition good. $3\frac{1}{8}$ (bent) $\times 2''$.

M. I. 0069. Five leather armour scales, detached: for general type see M. I. 0068, and *Ancient Khotan*, i. pp. xvi, 374, 411. Thong-holes generally as in M. I. ix. 002, but those for vertical lacing are irregular. Lacquered behind black over red (but one scale dark red with pattern resembling M. I. xxiv. 0040); in front, very thin black or dark red, over red, over black, leaving surface dark blackish crimson. Orn. with red line along one overlapping side and top, and with two -shaped figs. one above the other towards one long side. Beyond these, three scales show red ellipse with black centre. Orn. is scraped out after application of all the coats of lacquer, so that those beneath the surface are shown in concentric rings down to bottom of orn. Largest scale $3\frac{1}{2}'' \times 3\frac{1}{4}''$. Pl. L.

M. I. 0070. Fr. of leather armour scale; lacquered behind red; in front black over red, leaving red lines parallel to end; two lacing holes in corner. Gr. M. $3\frac{1}{2}'' \times 1\frac{3}{4}''$.

M. I. 0071. Fr. of leather armour scale, like M. I. ix. 002; lacquer mostly gone. $2\frac{1}{4}'' \times 2\frac{1}{16}''$

M. I. 0072. Fr. of bronze plate with two bronze rivets; sheathing for sq. stick. *C.* $1\frac{1}{2}'' \times 1\frac{1}{2}''$ (bent).

M. I. 0073. Piece of bronze plate, sq. with hole in each corner, and oblong slit cut out parallel to one edge; eye for hasp, *e.g.* on belt. $1\frac{1}{16}'' \times \frac{15}{16}''$.

M. I. 0074–0075. Two wooden stays for well-bucket (?), lower corners of notch deepened and cut outwards to hold string more securely. See Kha. ix. 0015; M. Tagh. b. 001. Length $4\frac{1}{8}''$ and $3\frac{5}{8}''$. *0074*, Pl. LI.

M. I. 0076. Small leather pouch, thumb-shaped, with scalloped mouth round which running string is drawn; well-dressed leather, stained dark outside; made in one piece, folded over and sewn up round bottom and along one side. Depth $2\frac{5}{8}''$, width of mouth $2\frac{1}{4}''$. Pl. L.

M. I. 0080. Felt pad, made of strip of buff felt doubled and stitched round edge; interior filled with powdered charcoal; possibly pounce bag (?), used for transferring designs to fabrics before painting or embroidery. $4'' \times c.\ 3''$.

M. I. 0081. Sling of stout goat's-hair cord, with elliptical felt pouch for holding stone; cord is of seven strands closely plaited; it divides into two to form edge of felt pouch, then unites again; broken. Length $2'\ 5''$. Pl. L.

M. I. 0082. Fr. of cotton fabric, indigo; plain weave, loose but regular; coarse. $11\frac{1}{2}'' \times 4\frac{1}{2}''$. [Analysed by Dr. Hanausek.]

M. I. 0083. a–c. Three pieces of strong woollen fabric, sewn together. *a*. Closely-woven dark crimson material, faded to pinkish-brown; plain weave, firm and regular; warp and woof threads run in pairs; texture of English hopsack tweed. $1' \times 3\frac{3}{8}''$. To end of this is sewn *b*: brick-red twill material faded on right side, finer than *a*, but very compactly woven; woof threads run over two warp threads, then under two, and so on. $5'' \times 3\frac{1}{2}''$. To bottom edge of *b* and *a* is sewn with grey yarn *c*, similar to *a* in texture but slightly finer; woof also looser, giving less smooth surface; colour as *b*. $6'' \times 4''$. *b* and *c*, Pl. XLVIII.

M. I. 0084. Fr. of coarse woollen fabric (*darri*), plain weave, even texture, ragged; warp threads (visible on surface) of dark brown yarn; woof single-ply woven in variegated stripes, as follows:—*i*. Remains of terra-cotta coloured band, $1\frac{5}{8}''$ deep. *ii*. Band of dull myrtle-green, $2\frac{1}{4}''$ deep; just within upper and lower edges of this green band is stripe of buff ($\frac{3}{8}''$ deep) with brown line along middle. *iii*. Band of terra-cotta, $1''$ deep. *iv*. Series of stripes, *c*. $\frac{1}{8}''$ deep, following thus: myrtle-green, buff, terra-cotta, brown, buff. *v*. Band of terra-cotta, $\frac{1}{2}''$ deep, forming selvedge. Pattern of piece prob. formed of alternations of *i* and *ii* as torn edge beyond *i* shows remains of stripes as in *ii*. Colours fairly preserved. $11'' \times 6\frac{1}{2}''$. Pl XLVIII.

M. I. 0085. Handful of goat's hair, mixed with straw.

M. I. 0086. Round felt cord, salmon-coloured, made by felting together a number of loosely spun strands of yarn. Length (knotted) $5\frac{1}{2}''$.

M. I. 0087. Fr. of very fine silk fabric, dark terra-cotta; open muslin-like texture, plain uneven weave; worn. Cf. M. I. xxi. 006. $12\frac{1}{2}'' \times 7''$. [Analysed by Dr. Hanausek.]

M. I. 0088. Three frs. of coarse woollen fabric (*darri*); warp of brown yarn, woof rich red (faded) and dark green. Design: red key pattern outlined green, separated by bands of red which are covered with serrated pattern in green; close satin weave. Largest fr. $6'' \times 2\frac{1}{2}''$.

M. I. 0089. Part of wooden comb with slightly arched back. $2\frac{1}{2}'' \times 2\frac{1}{4}'' \times \frac{3}{8}''$.

M. I. 0090. Wooden key, of type Ka. I. 001; two pegs, handle pierced. $3\frac{1}{8}''$ (with handle $5\frac{3}{4}''$) $\times \frac{1}{2}'' \times \frac{3}{8}''$. Pl. LI.

M. I. 0093. Base of lacquered wooden bowl (part of), circular, red one side and black the other. Diam. $4\frac{1}{4}''$, thickness $\frac{3}{16}''$.

M. I. 0094. Two pieces of silk damask, dull sage-green, fine, evenly woven; ragged; ground plain, pattern twill. Design: honeycomb diaper of hexagons, carried out in bands formed by three lines of dots; in each hexagon is quatrefoil lozenge formed by four small lozenges; cf. Ch'ien-fo-tung damasks, e.g. Ch. 00336. $1'\ 10'' \times 1'\ 7''$ and $1'\ 1'' \times 7''$. (Design) Pl. CXXI.

M. I. 0095. Blown-glass fr. of light green colour; appears to be thick 'bull's-eye' base of bulbous vessel; texture slightly granular internally but translucent; circular. Diam. $1\frac{3}{8}''$.

M. I. i. 4. Wooden seal-case; cavity (roughly cut) $1\frac{1}{16}'' \times \frac{1}{2}''$; one notch for string on each side. $2\frac{3}{8}'' \times 1\frac{3}{16}''$.

M. I. i. 002. Three leather armour scales; same pattern as M. I. ix. 002, but broken and decayed, and lacquer considerably gone. Average size $2\frac{3}{4}'' \times 2\frac{1}{16}''$.

M. I. i. 003. Three leather armour scales; same pattern as M. I. ix. 003, but broken and decayed; one longer than usual ($4\frac{1}{4} \times 1\frac{7}{8}''$), with lacquer almost entirely gone. Thong-holes somewhat irregular, having prob. been added to as armour grew old; bronze rivets with round flat heads, prob. ornamental. With these, fr. of scale, lacquered black showing no pattern.

M. I. i. 004. Part of wooden comb with arched back; cf. M. I. i. 0011. $2\frac{3}{8}''$ (broken) $\times 2''$, thickness $\frac{1}{2}''$, 11 teeth to 1 inch.

M. I. i. 005. Fr. of wooden writing slip; as M. I. iv. 0014; blank; $2\frac{7}{8}$ (broken) $\times \frac{11}{16}''$.

M. I. i. 006. Strip of wood, flat one surface, convex the other, notched in middle to hold string; over notch knotted leather thong, decayed. $4\frac{3}{8}'' \times \frac{13}{16}''$.

M. I. i. 007. Leather 'buckle' and thong; 'buckle' formed of piece doubled and slit down middle; through this is passed thong, knotted to prevent slipping. Dark red outer surface; insect-eaten. 'Buckle' $1\frac{1}{4}'' \times \frac{15}{16}''$, thong $2\frac{3}{8}'' \times \frac{3}{8}''$.

M. I. i. 008. Leaf of apricot. Length $2\frac{1}{8}''$.

M. I. i. 009. Strip of fine silk damask, buff; pattern, rows of small double concentric lozenges divided by chevron lines; ground plain, pattern twill; soft and insect-eaten. $1'\ 9\frac{1}{2}'' \times 5\frac{1}{4}''$.

M. I. i. 0010. Two cuttings of fine tanned hide: lambskin (?). Length, $1'\ 3''$ and $6''$.

M. I. i. 0011. Broken wooden comb; cf. L.A. VIII. 001; back slightly arched. $3\frac{1}{2}'' \times 2\frac{1}{8}'' \times \frac{3}{8}''$.

M. I. i. 0012. a–c. Three fabric frs. (*a*) Soft silk damask, dull sage-green, with pattern of tiny double concentric lozenges; ground finely corded; pattern twill; fine; rather dirty. $2'' \times 1''$. (*b*) Knotted to (*c*). Plain silk fabric, regular but rather loose texture; turquoise green. *C.* $2'' \times 1\frac{3}{8}''$. (*c*) Fine cream silk gauze, woven in open-work lattice pattern; twined weave. *C.* $1\frac{1}{2}'' \times 1\frac{1}{2}''$.

M. I. i. 0014. Part of wooden comb with flat arched back; cf. M. I. i. 0011. $2\frac{3}{4}'' \times 1\frac{7}{8}'' \times \frac{1}{4}''$.

M. I. i. 0015. Lathe-turned wooden ring with rounded edge. $\frac{7}{16}'' \times \frac{1}{4}''$.

M. I. ii. 003. Wooden tally-stick with two rows of notches (ten and eight). Bark still on; but shallow groove cut in it round stick towards each end, and spiral line connecting these grooves (cut before notches). Length $4\frac{5}{16}$. Pl. LI.

M. I. ii. 0025. Quilted cloth shoe of plain loosely-woven buff cotton (?). Sole has been picked off; uppers cut in three parts—one long strip forming back and sides of heel and coming forward on each side to middle of foot, the other two forming each one side of vamp and meeting over toes; heel-piece made of five layers of cloth, the edges turned in and over-headed. It is strengthened by a lattice-work pattern, stitched over whole ground in double buff thread, and bordered by two rows of running stitching (' split stitch ') round the edge. Back of heel worn through; heel-piece stood $2\frac{1}{2}''$ high, and in front its lower corners are sewn to those of the toe-pieces.

These cover each one side of front half of foot, and their edges are joined for space of $3\frac{1}{4}''$ at toe end, being so cut, also, as to form a turned-up point at its extremity. Above this joined part, each side is cut away in a curve so as to leave an oval opening over front of foot, the upper corners being tied together by strings of buff cloth. The joined edges over the toe are covered by a strong V-shaped stitching that forms a raised band over the seam, and the same stitch is used to bind the edge of the oval opening.

Round each piece run two rows of stitching as on heel-piece, and ground of each is embroidered with three palmate leaves, worked in satin stitch with buff thread (the embroidery being done after the piece was finished, as in case of heel). Length $8\frac{1}{2}''$. Pl. L.

M. I. ii. 0026. Reed arrow-shaft, with marks and remains of binding at one end; no lacquer. Length 10″.

M. I. ii. 0027. Half rind of fruit (gourd ?) turned outside in. Gr. M. $2\frac{1}{8}''$.

M. I. ii. 0028. Torn fr. of leather, very soft; prob. lambskin, from fine curly wool adhering in part; roughly rectang., with long narrow slit cut out slantwise from near one corner almost to opposite side. Three edges and edges of slit show marks of careful regular stitching; fourth edge torn. *C.* $5\frac{1}{2}''$ sq.

M. I. ii. 0029. Curved strip of wood lacquered (over canvas), black outside, red inside; part of side of shallow tray; cf. M. I. iv. 0030. Length point to point $5\frac{7}{8}''$, width $\frac{13}{16}''$.

M. I. ii. 0030. Wooden spoon or spatula, roughly cut; 'bowl' flat and oblong. Length $4\frac{3}{4}''$, 'bowl' $1\frac{3}{4}'' \times \frac{3}{4}''$. Pl. LI.

M. I. ii. 0031. Wooden stay for well-bucket, as M. I. 0074. Length $3\frac{3}{16}''$.

M. I. ii. 0032. Straight-sided wooden cup, fr. from wall of; lacquered (over canvas) red inside, black outside, but lacquer almost entirely gone from latter; four small holes, irregularly placed, two having bronze rivets in them. Gr. M. $2\frac{1}{4}''$.

M. I. ii. 0033. Fr. of horn cup (?), similar in shape to preceding; three holes triangle-wise near orig., and another near broken, edge; one plugged with wood. Gr. M. $2\frac{1}{2}''$.

M. I. ii. 0035. Fr. of silk damask, soft, thin; pattern of concentric lozenges; orig. green, much discoloured and worn. *C.* $11\frac{1}{2}'' \times 10\frac{1}{2}''$.

M. I. ii. 0036. Fr. of reddish-brown woollen fabric, loose twill (herring-bone) weave; dirty and discoloured. Gr. M. $7\frac{1}{2}'' \times 6''$.

M. I. ii. 0037. Yellow woollen yarn; mass of short frs. Gr. length $2\frac{1}{2}''$.

M. I. ii. 0038. Part of gourd vessel, which has been broken and mended with felt. Strip of thick buff felt, $8\frac{1}{2}''$ long, sewn to gourd of which only frs. now remain. Along sides of orig. break, holes have been made at regular intervals of about $\frac{1}{2}''$, and the strip of felt carefully and closely sewn on with goat's-hair string. These holes were then plugged with short wooden pegs to prevent leakage. Gr. breadth of frs. of gourd $2\frac{5}{8}''$, thickness $\frac{5}{16}''$. Pl. LI.

M. I. ii. 0039. a–d. Four frs. of wooden lacquered bowl, black outside and red in. Gr. M. $3\frac{1}{4}'' \times \frac{3}{4}'' \times \frac{1}{16}''$.

M. I. ii. 0040. Flat piece of wood, cut to rough oval with V-shaped nick in each side; pierced at one end. A label (?). $1\frac{7}{8}'' \times \frac{7}{8}'' \times \frac{1}{8}''$.

M. I. ii. 0041. Bent fr. of bronze plate, holding between folds small fr. of wood covered with buff felt; much corroded. Gr. M. $1\frac{3}{8}''$.

M. I. iii. 002. Head of millet in seed, from small apartment adjoining M. I. iii.

M. I. iii. 003. Fr. of wooden comb like M. I. i. 0011. $1\frac{7}{8}'' \times 1\frac{1}{4}'' \times \frac{3}{8}''$.

M. I. iii. 004. Cubical bone die. Holes drilled in sides for numbers which are arranged: six opposite three, four opposite two, five opposite one. Cf. M. Tagh. a. 0031, a. iv. 00172; i. 007. $\frac{1}{2}''$ cube. Pl. LI.

M. I. iv. 006. Specimen of wheat.

M. I. iv. 007. Knife, with one-edged iron blade, straight, tapering, much corroded, set in plain horn handle elliptical in section. Length (of whole) 6″, of handle 3″. Pl. LI.

M. I. iv. 008. Strip of leather, doubled, leaving loop at top. Below loop twisted closely and evenly on itself, forming a long flexible thong; from loop a sq. tongue of leather projects, prob. for binding. Switch (?). Length $11\frac{1}{4}$″. Pl. LI.

M. I. iv. 009. Terra-cotta spinning whorl; flat disc, pierced; ground down from potsherd; cf. M. I. iv. 0012. Diam. $1\frac{1}{4}$″, hole $\frac{7}{16}$″, thickness $\frac{5}{16}$″. Pl. LI.

M. I. iv. 0010. Fr. of horsehair gauze, perhaps for sieve; 'wrapped-twined' weave; cf. L.A. VI. ii. 0043. Gr. M. $3\frac{1}{4}$″. Pl. L.

M. I. iv. 0011. Fr. of leather armour scale, same pattern as M. I. ix. 002; bad condition. 3″ × (bent) $2\frac{1}{8}$″.

M. I. iv. 0012–0013. Two spinning whorls of red impure clay; plain discs pierced. Diam. 1″.

M. I. iv. 0014–0016. Wooden writing slips, blank; bevelled edges, rectang. *0015, 0016* broken at end. *0014*, $2\frac{1}{4}$″ × $\frac{5}{8}$″.

M. I. iv. 0017. Fr. of bronze plate with remains of rivet holes. Gr. M. $1\frac{3}{16}$″.

M. I. iv. 0020. Polished cylindrical rod of yellowish quartz. Length 2″ (broken), diam. $\frac{5}{8}$″.

M. I. iv. 0021. Small pottery bowl, red clay, hand-made, circular. Diam. of rim $1\frac{1}{4}$″, H. $\frac{5}{8}$″.

M. I. iv. 0022. Hollow wooden cylinder, with outer surface thinned away for space of $\frac{5}{8}$″ at one end. (This end broken.) Worn and decayed. Diam. of outer surface $1\frac{1}{16}$″, of thinned end $\frac{3}{4}$″, of hole $\frac{1}{2}$″, length $1\frac{7}{8}$″.

M. I. iv. 0023. Fr. of soft woollen fabric, smoothly-woven twill, pale buff, caked with sand. Gr. M. 9″ × 7″.

M. I. iv. 0026. Bone plectrum of boomerang shape, used for plucking strings of musical instrument. One side smooth, the other shows rough spongy texture of interior of bone; edges show wear from hand grasp, and end from plucking; polished side orn. with groups of engraved dots. A butt end, two holes (one broken) for cord; prob. attached to wrist of performer, or to instrument played upon. Cf. Appendix *H*. Length $7\frac{3}{4}$″, gr. thickness *c.* $\frac{1}{4}$″.

M. I. iv. 0027. Fishing net of hempen cord; meshes about 1″ sq.; ragged. Gr. length 2′. Pl. L.

M. I. iv. 0028–0029. Two frs. of wooden combs; slightly arched backs as M. I. i. 0011. *0028*, $2\frac{3}{4}$″ × 1″ × $\frac{3}{8}$″; *0029*, $2\frac{1}{2}$″ × $2\frac{1}{4}$″ × $\frac{1}{4}$″.

M. I. iv. 0030. Bottom of lacquered box or tray. Flat disc, lacquered (over canvas) black one side, red the other; on black side some irregular marks of red lacquer; round edge is applied a thin pliable strip of wood, part of side. Diam. $6\frac{5}{8}$″, thickness $\frac{3}{16}$″.

M. I. vi. 001. Fr. of leather armour; 'green' leather, $\frac{5}{16}$″ thick, lacquered black inside, irregularly black and red outside; two slits in one corner, and one half-way down each side, for attachment to next piece; also three round holes in line across upper half. Larger and thicker than usual, curved; prob. back left shoulder-piece. Gr. M. $4\frac{5}{8}$″.

M. I. vii. 31. Ink-seal made of tip of horn, bored for suspension; on end are cut a lotus flower outspread, with Svastika and Tib. chars. above. Dr. L. D. Barnett reads the latter as the non-Tibetan syllables *ăṅ* (?) *-tōnĕ*, and believes that they possibly represent an attempt to render the Western 'Anthony'. Length $2\frac{7}{16}$″, diam. of end $\frac{9}{16}$″. Pl. LI.

M. I. vii. 003. Horn seal, like M. I. vii. 31. Design, a large Svastika within arms of which are four Tib. chars. reading *gños k'al brtsan*. *Gños* is the name of a tribe in Tibet; *k'al* means a load; meaning unintelligible (Dr. L. D. Barnett). Length 2″, diam. of end $\frac{9}{16}$″. Pl. LI. (Seal impression wrongly placed.)

M. I. vii. 004. Horn seal, like M. I. vii. 31. Design, an outspread lotus flower, above which are two lines of Tib. chars., with Svastika at each end of upper line and scroll above. Chars. read by Dr. L. D. Barnett as *onala gñan lha; gñan lha* may be translated as 'disease god' or 'fierce god'. Length $2\frac{1}{2}$″, diam. of end $\frac{9}{16}$″. Pl. LI. (Seal impression wrongly placed.)

M. I. vii. 005. a–b. Wooden weaving stick and spinning whorl. (*a*) Wooden stick, narrows quickly at one end and gradually, but to finer point, at the other. Cf. L. B. 0011, etc. $9\frac{1}{2}$″ × $\frac{7}{16}$″ to $\frac{1}{8}$″. (*b*) Wooden disc, pierced; slightly convex at back; in front flat with decoration of three incised concentric circles. Diam. $1\frac{3}{4}$″, thickness $\frac{5}{8}$″. Pl. LI.

M. I. viii. 001. Fr. of leather helmet (?), lower edge, curving in to neck, then out to rim; inside lacquered red; outside black (over layers of red and black), with thin coating of red in band along rim, and remains of two red bands above. Parallel to rim is bare strip ($\frac{1}{4}$″ wide), from which lacquer has been removed; two holes for attaching thongs, in which are now two silk strings, buff and gamboge, knotted together. Lower rim and upper edge are orig. edges of fr., sides have been cut. Length (chord) 5″, gr. H. $3\frac{1}{8}$″. Pl. L.

M. I. viii. 005. Wooden key; cf. Ka. I. 001. Three pegs (one missing) arranged in equilateral triangle; handle pierced for string. $3\frac{3}{4}$″ (with handle $5\frac{1}{8}$″) × 1″ × $\frac{1}{4}$″.

M. I. viii. 006. Horn seal, like M. I. vii. 31. Pierced in middle, and smoothed at end, but device not cut. Length $2\frac{1}{8}$″, gr. diam. $\frac{1}{2}$″.

M. I. viii. 007. Wooden key; cf. Ka. I. 001. Two pegs; these have split wood so that key has been bound on either side of pegs with string and grass fibre. Handle (plain continuation of key proper) is pierced twice and also

split; distance between holes same as that between pegs. Clearly maker, having split one end, tried the other, and splitting that, bound it. 2″ (with handle $5\frac{3}{4}$″) × $\frac{5}{8}$″ × $\frac{5}{16}$″.

M. I. viii. 008–0010. Three wooden weaving sticks, like M. I. vii. 005. a. 009 differs in that at thick end it is cut rather sq. in section. Gr. length 8″, thickness $\frac{1}{2}$″ to $\frac{1}{8}$″.

M. I. viii. 0011. Wooden writing slip, blank; at each end is hole and on each edge bark. $8\frac{1}{2}$″ × $\frac{7}{16}$″ × $\frac{1}{4}$″.

M. I. viii. 0012. Wooden pen made of split twig, trimmed to a point. 4″ × $\frac{5}{16}$″ to $\frac{1}{12}$″.

M. I. viii. 0013. Wooden bridge of musical instrument (part of), for sympathetic strings; edge serrated with nicks *c.* $\frac{1}{16}$″ apart; triangular in section. See Appendix *H*. 5″ × $\frac{3}{4}$″ × $\frac{1}{2}$″.

M. I. viii. 0014. Cylindrical lacquered wooden box, part of side, black outside and red inside; both ends of fr. have been trimmed to sharp edge, but use is not clear. $3\frac{3}{8}$″ × $\frac{3}{4}$″ × $\frac{1}{4}$″.

M. I. viii. 0015. Wooden stick, trimmed to leave projecting button on each end; much worn in middle as by cord, prob. used for tightening knots. $5\frac{3}{4}$ × $\frac{5}{16}$″. Pl. LI.

M. I. viii. 0016. Section of reed with pith withdrawn. $2\frac{3}{4}$″ × $\frac{3}{8}$″.

M. I. viii. 0017. Fr. of silk brocade; ground buff, pattern of rosettes and hexagonal cartouches (?) in blue-green yellow, and other colours faded beyond recognition. In weave a double cloth, resembling brocade of Ch. 009, etc.; well-defined twill face, front and back cloths firmly bonded together; pattern seems similar to that of M. Tagh. a. iv. 00177. $3\frac{1}{2}$″ × 3″. Pl. CXI.

M. I. viii. 0018. Part of vertebrae of bird (?). $1\frac{1}{2}$″ × $\frac{1}{2}$″.

M. I. viii. 0019. Rib bone, prob. of rabbit. Length $3\frac{1}{2}$″.

M. I. viii. 0020. Flat piece of horn curved to very gradual crescent; oblong hole in middle, prob. for a thong-end. $3\frac{1}{8}$″ × $\frac{1}{2}$″ × $\frac{5}{16}$″. Pl. LI.

***M. I. ix. 002. Leather scale armour,** twenty pieces, all now separate except two pairs which have long sides attached; cf. M. I. 0068, 0069, xxiv. 0040, etc. Lacquered inside with thin coat of red over black; outside black, over red, over black; latter coats visible where orn. scraped away, as in M. I. 0069, etc.; here orn. consists of two (or three) comma-shaped figs. one above another, about $\frac{1}{2}$″ from one long side. Pair of holes near each corner, parallel to long edge, for lateral lacing; another pair (or one large hole) parallel to short edge, and about one-third down from it, for vertical lacing; instead of latter, four longer scales have two holes, one-third of way respectively from each end.

Method of attachment of overlapping long sides is as follows:—From the top of the previous joint the thong is brought from behind through the lower of the two holes near top corner, passed down in front and to back again through lower hole of bottom corner; then brought up behind and to front again through the upper of the top corner holes, lastly to the back through the lower top corner hole, through which it was first brought. It is then carried along behind for attachment of next scale.

This method of lacing makes no use of the upper of the bottom corner holes, and is therefore prob. not the method orig. employed. Condition good.

Scale (average) $2\frac{3}{4}$″ × 2″.

M. I. ix. 003. Leather scale armour, twenty-four pieces; cf. M. I. 0069, xxiv. 0040, etc. Six scales are of ordinary size (average $2\frac{3}{4}$″ × $2\frac{1}{4}$″), three being still joined by long edges; seven of greater length (average $3\frac{1}{8}$″ × $1\frac{15}{16}$″), two being joined; seven of still greater length (average $4\frac{1}{4}$″ × $2\frac{1}{16}$″), three still joined; and the remainder are frs.

Smaller scales much resemble M. I. ix. 002, but have only one coat of lacquer (black), with orn. of two shallow elliptical rings sunk in the black, and higher centre lacquered red. Three holes at equal intervals down long edge for lateral lacing, and bronze rivet (apparently ornamental) half-way between the ornamental rings; lacing which remains in long sides too disjointed to show method employed.

The longer scales resemble these; but for vertical lacing there are one (or two) pairs of holes placed along top end, and another hole or pair of holes parallel to this, towards middle of scale. The longest scales have additional rivets, orns., and holes in proportion to their length. Condition very fair. Pl. L.

M. I. ix. 004. Fr. of leather armour scale, as M. I. ix. 003, etc.; orn. (sunk in black lacquered surface, with red centres) consists of an ellipse and a crescent with tips turned towards ellipse; crescent prob. part of larger orn. Gr. M. $1\frac{3}{4}$″.

M. I. ix. 008. Piece of strong woollen fabric, faded red (herring-bone) twill weave; cf. M. I. 0083. b.; ragged and patched. 1′ 6″ × 1′ 5″. Pl. XLVIII.

M. I. ix. 009. Wooden stick, flattened at one end and bound round with fibre; bound round also twice at other end where it is split, and where a groove was cut in end; prob. part of an arrow; cf. M. Tagh. b. 007. $7\frac{5}{8}$″ × $\frac{1}{4}$″.

M. I. x. 006. Fr. of leather armour scale, same pattern as M. I. ix. 002, but most of black lacquer gone from front; also large square hole near middle. $2\frac{11}{16}$″ × (broken) $1\frac{15}{16}$″.

M. I. xii. 002. Fr. of fine buff silk, even texture, much encrusted with sand, plain weave. $10\frac{3}{4}$″ × 8″.

M. I. xii. 003. Fr. of buff silk, much crumpled and sand-clogged, showing traces of printed pattern in faded indigo; plain weave; dirty and decayed. Gr. M. $5\frac{1}{2}$″.

M. I. xii. 004. Fr. of buff silk, soft; corners knotted; plain weave, finely corded. $7\frac{3}{8}$″ × *c.* 7″.

M. I. xii. 005. Fr. of reddish-brown silk damask, ground plain, pattern twill, loose weave; pattern, repeating hexagons in outline, each containing six-petalled rosette; much decayed. 9″ × 4½″.

M. I. xii. 006. Bundle of felt cord, as M. I. 0086, but finer; made of two or three buff strands laid side by side and joined by a coating of red felt. Average length 2′ 6″.

M. I. xii. 007. Strip of thin cotton gauze, buff; twined weaving very open but regular; warp threads run in pairs, and, after every three rows of woof, the threads in each pair are crossed over each other, the R. thread becoming the L. They remain thus for another three rows of woof, and are then crossed back to their original positions; the crossings occasion interval in which there is no woof thread. Decayed. (Analysed by Dr. T. F. Hanausek.) 4′ × *c.* 3¼″.

M. I. xii. 008. Fr. of thin blue-green silk; plain weave, even texture; much decayed. 2⅜″ × 1⅜″.

M. I. xiii. 001. a. Flat oblong pouch of yellow felt, cut out in four pieces—front, back, flap cover, and long strip forming bottom and sides—and sewn with buff thread. Cover is cut in pointed trefoil shape, and by means of red string at point was tied over to another string attached to bottom of bag in front; handle made by another (pink) cord attached to top corners of bag; front edge of mouth and edge of flap bound with buff silk sewn with red, and flap also orn. with row of red stitching. 'Ears' left on strip forming sides to protect top corners. H. 3¼″, with flap 7″, width 5⅜″, depth (back to front) ¾″. Pl. L.

M. I. xiii. 001. b. Skein of goat's-hair yarn, dark brown, wound upon stick. Length 4½″.

M. I. xiii. 001. c. Piece of leather scale armour, prob. from same suit as M. I. ix. 002. 2¾″ × 2¼″.

M. I. xiv. 0073. Fishing net of stout string; meshes (average) 1½″–1⅝″; knotted together and considerably broken. *C.* 4′ sq.

M. I. xiv. 0074. Piece of leather scale armour, lacquered inside dark red-brown, outside brilliant red; orn. with fig. like reversed S with short detached bar above and below. Pattern scraped out as in M. I. 0069, etc., showing underlying coats of lacquer (red-brown and yellow); central line raised and consequently red. Three holes down each long side, and two across top end; also pair of holes parallel to latter, but ⅝″ from edge. No top coat of lacquer down side where next scale overlapped. Condition good. 3⅜″ × 2$\frac{15}{16}$″. Pl. L.

M. I. xv–xvi. 001. Three frs. of coarse woollen fabric, plain weave, red to buff, loose and somewhat irregular texture. Largest piece, *c.* 6½″ sq. Also fr. of brick-coloured twill fabric (two-ply weft), much eaten away, Gr. M. 4½″, and piece of hemp cord (2 strands), knotted. Length *c.* 5½′.

M. I. xv–xvi. 002. Fr. of bronze plate, thin, corroded. 1⅜″ × 1″.

M. I. xv–xvi. 003. Bronze slag, irregular lump. 1$\frac{7}{16}$″ × ⅞″ × ⅛″ to ¼″.

M. I. xv–xvi. 004. Piece of leather scale armour; 'green' leather, lacquered black outside and in; holes as in M. I. xxiv. 0040; bronze rivet near one edge. Condition good. 2$\frac{15}{16}$″ × 2$\frac{1}{16}$″.

M. I. xvi. 001. Bar of horn; in section, triangular with flat top; bevel taken off each end; bevelled surfaces and sloping sides, and under surface covered with fine oblique lines, as of file. Length 4⅞″, H. ½″, width of base $\frac{9}{16}$″.

M. I. xvi. 0014. Fr. of red woollen fabric, loose plain weave; with small ball of ends of light buff thread and tangled mass of the same. Length of fabric *c.* 1′ 2″. Ball, Pl. LI.

M. I. xix. 005. Frs. of birch-bark; surface stained blue-black and lacquered red. Largest fr. 1¼″ × 1¼″.

M. I. xx–xxi. 001. Fr. of coarse buff woollen fabric. Regular weaving, threads running in pairs; one edge and end turned in and sewn; remains of felt lining behind; perhaps part of heel-piece and side of shoe. 6½″ × 3″. Pl. XLVIII.

M. I. xx–xxi. 002. Fr. of pinkish-buff woollen fabric; loose twill weave; dirty and discoloured. 6″ × 5″.

M. I. xx–xxi. 003. Three frs. of salmon-coloured woollen fabric, sewn together with buff thread; evenly woven, rather loose texture; ragged, insect-eaten, and faded. 8″ × 6″.

M. I. xx–xxi. 004. Fr. of string netting, as M. I. xiv. 0073. Length 1′ 8″, mesh 1½″ sq.

M. I. xx–xxi. 005. Frs. of flat plaited band of buff wool, knotted; shoe-string (?). 6¾ × *c.* ⅜″.

M. I. xx–xxi. 006. Fr. of very coarse buff woollen fabric, with edge turned in and signs of stitching; lining of shoe (?). Woof pressed closely together, and warp threads almost invisible. 5½″ × 3½″. Pl. XLVIII.

M. I. xx–xxi. 007. Fr. of buff woollen fabric, plain weave, two-ply weft; very soft and decayed. Gr. M. 4″.

M. I. xxi. 1. Reed pen with slit nib. Length 3⅞″.

M. I. xxi. 001. Fr. of bottom of lacquered wooden box, as M. I. iv. 0030. 5″ × 1⅞″.

M. I. xxi. 004. Two frs. of woollen fabric (*darri*), same type as M. I. 0088; warp dark brown; woof red (ground colour), yellow, dark green, and blue. Pattern: variety of key, outlined with band of green and yellow. Gr. M. 6″. Pl. XLIX.

M. I. xxi. 005. Fr. of coarse red woollen fabric, roughly woven. Length 4½″.

M. I. xxi. 006. Fr. of muslin-like silk (?) fabric, resembling M. I. 0087; pinkish red. *C.* 3″ × 2¾″.

M. i. xxi. 007. Red woollen yarn, bundle of loose pieces unequally dyed. Length 8″.

M. i. xxiii. 0022. Bundle of fabric frs., including strip of plain coarse red woollen fabric (length 9″); strip of decayed dark brown-grey silk (length $10\frac{1}{2}$″); and piece of yellowish-brown silk damask, very soft (5″ × $4\frac{1}{4}$″). Also bundle of bristles (average length 4″) wound round with greenish-blue wool; and broken frs. of light buff thread. Red fabric, Pl. XLVIII.

M. i. xxiv. 001. Ball of woollen yarn, two-ply, coloured light blue to white.

M. i. xxiv. 005. Wooden weaving stick, like M. i. vii. 005. a; bound with grass fibre near narrow end. 11″ × $\frac{7}{16}$″ to $\frac{1}{8}$″.

M. i. xxiv. 006. Wooden stay for well-bucket, as M. i. 0074. Length $3\frac{3}{4}$″.

M. i. xxiv. 009. Reed pen; pith removed from butt end. $4\frac{3}{4}$″ × $\frac{3}{8}$″.

M. i. xxiv. 0037. Wooden needle; eye $\frac{5}{16}$″ diam. drilled through 1″ from end; stick here $\frac{1}{2}$″ diam., thence tapering to ends. Length $5\frac{3}{16}$″.

***M. i. xxiv. 0040. Leather scale armour;** three pieces, one consisting of six scales (four in one row, two in another), one of three scales, and one of two; same type as M. i. 0068, 0069, etc.

Lacquered inside dull red, and outside dull red and black seven times alternately, the top coat being red; each scale orn. with three shallow cup-like depressions, in line parallel to, and $\frac{1}{2}$″ from, the overlapping long side; these scraped out as in M. i. 0069, etc.

For lateral lacing a pair of holes are pierced towards each corner, by the long edge; and, for vertical lacing, two pairs of holes parallel to end (one pair being placed about $\frac{1}{4}$″ from top, and the other about half-way down scale). The scales prob. overlapped upwards. (See *Ancient Khotan*, i. p. xvi.)

Method of attachment is as follows:—Lateral lacing; scales are first laid with long sides overlapping so that holes in lower exactly correspond to those in upper. Thong is brought from back through lower of bottom corner holes, passed up, and to back again through upper of bottom corner holes; then up behind and to front and back again through top corner pair of holes; then across behind to holes in opposite top corner, through which it is passed to front and back (working downwards), and so on to second bottom corner holes; thence across to next bottom corner and again up as described.

Vertical lacing:—for this two thongs used, running side by side down the pairs of holes described. The method of starting or finishing off these at the top is not clear, as the ends are now found loose behind. The thongs are taken down front of the scale, and passed back through the pair of holes half-way down; round a thong (which runs horizontally behind these holes along whole set of scales, never appearing in front); and to the front again through the same holes. Continuing down the front, they pass behind the overlapping top of the next scale, are brought to the front through its top pair of holes, and so on as described, being finally passed sideways through the two upper holes of the last plate to which they reach. Scale (average), 3″ × $2\frac{5}{16}$″. Pl. L.

M. i. xxvi. 001. Three frs. of coarse woollen fabric (*darri*), with border separately woven and sewn to main piece; latter has red ground and fret pattern with double outline of blue and yellow, or blue and green. Pattern resembles a series of T-shaped forms, tilted at an angle of 45° and touching each other—the cross-bar of one T meeting centre of body of next, and the series arranged in vertical lines. This gives a counter-change with the ground, which therefore is also composed of T shapes. Each limb of the pattern T has dentil-like forms attached to one edge and projecting inwards. The border attached to one edge is rather less than 1″ wide and woven in blue and yellow, the pattern consisting of conventional running animals, such as may be seen in ancient Cretan, Greek, and Persian art; border terminated by several narrow bands of wrapped-twined weave, having the appearance of braid, and giving great strength to edge.

The whole warp is of dark grey wool; the red ground is woven in alternate bands of slightly differing shades (as M. i. xxvi. 004). General texture a broken twill, well woven; colours well preserved; fabric very ragged and insect-eaten. Largest fr. $11\frac{1}{4}$″ × $4\frac{3}{4}$″. Pl. XLIX.

M. i. xxvi. 002. Three frs. of coarse woollen fabric (*darri*), with border resembling that of M. i. xxvi. 001, but less finely woven, and not separate from the main piece; running animals more sketchy, and prob. intended to represent bulls; they are in pale blue on indigo ground.

The braid-like selvedge is in narrow parallel bands of red, yellow, green, light blue, and dark blue (outside edge). Field on rich red ground shows an apparently irregular arrangement of frets, and spots in green, light and dark blue, and ochre yellow. Colours well preserved; fabric very ragged. Largest fr. 11″ × $2\frac{3}{4}$″. Pl. XLIX.

M. i. xxvi. 003. Wooden tally-stick, retaining bark; towards one end (broken) eight notches in a row and two more side by side; each marked with red crescent. Length 1′ 3″.

M. i. xxvi. 004. Frs. of coarse woollen fabric (*darri*), of same type as M. i. xxi. 004. On a ground woven in alternate bands of dark green and buff, variations of the key pattern in dark red and red-purple; warp threads (buff) occasionally come to the surface and form outline to arms of key. Loosely woven; one long edge shows selvedge, the others frayed; colours rather faded. $11\frac{1}{2}$″ × $3\frac{1}{2}$″. Pl. XLIX.

M. i. xxvii. 001. Square of thick silk brocade, sewn up into small triangular pouch; ground buff, with pattern in dark and light blue, purple, light green, and salmon

colour. Worn and ragged, and pattern indeterminate but evidently of Chinese type. The fabric is badly held together, and the figuring yarns are only slightly held to back of fabric by a very delicate binding woof; remains of soft green silk lining. (Cf. Ha. i. 0031, Pl. CXII.)

Inside pouch is sawdust, possibly sandal, and the article may have been a perfume sachet. The shape is certainly that of the modern '*aṭar-dān*'. Pouch, length $5\frac{3}{4}''$, width at bottom $3\frac{1}{2}''$.

M. I. xxvii. 009. Bag of striped woollen material resembling fine *darri*; ground, golden buff; stripes, $\frac{3}{4}''$ apart and $\frac{1}{4}''$ broad, composed of bright red band and dull green band divided by thin line of buff and edged on outer sides by indigo line; woven very regularly on thick warp, giving slight corded effect.

Bag made by folding a long strip of the material end to end, and sewing the long edges together with blue yarn; at mouth a hem and orig. a drawing-string; now, hem partly cut off R. and L. of a central point, and the two strips so achieved plaited together and apparently used as a carrying strap. Coarse patches have been added at bottom angles and another at mouth; a piece of black square 'military' cord is attached as a sort of tassel to middle of bottom edge. Evidently a bag for carrying coins and the like; much discoloured and torn in places. $10\frac{1}{2}'' \times 6''$.

M. I. xxvii and xxviii. 001. Ears of bearded wheat or barley.

M. I. xxxii. 005. Ball of woollen thread, in frs. apparently $3\frac{1}{2}''$–$4''$ long; light buff.

M. I. xxxii. 006. a–c. Turkish documents in 'Runic script; three frs. on coarse greyish-brown 'laid' paper, rather thin and uneven in quality, and inscr. on one side only, except (*b*); writing mostly distinct. (*a*) *obv.* 22 ll.; (*b*) *obv.* 9 ll., *rev.* 13 ll.; (*c*) *obv.* 9 ll. See V. Thomsen, *J.R.A.S.*, Jan. 1912, Pl. I, pp. 181 sqq.; above, pp. 471 sqq. (*a*) $1' \frac{1}{2}'' \times 10\frac{1}{2}''$, (*b*) $8\frac{1}{2}'' \times 10\frac{1}{2}''$, (*c*) $6'' \times 10\frac{1}{2}''$. Pl. CLIX.

M. I. xl. 0014. Wooden pen made of stick trimmed to point; bark still on; cf. *Ancient Khotan*, ii. Pl. CV, N. x. 05. Length $5\frac{1}{4}''$.

M. I. xlii. 003. Reed pen, as M. I. xxi. 1. Length $5''$. Pl. LI.

M. I. xliv. 0010. Specimen of paper, blank, very dirty. $6'' \times 5''$.

M. I. lviii. 002. Irregular strip of horn. Length $6\frac{5}{8}''$, width (average) $\frac{7}{8}''$, thickness $\frac{1}{8}''$.

CHAPTER XIII

THE ANCIENT BUDDHIST SHRINES OF MĪRĀN

Section I.—SCULPTURED REMAINS OF RUIN M. II

Much pleased as I was with the abundance of the materials illustrating the later occupation of the site which I found in the ruined fort, I felt glad when the excavations had sufficiently advanced for me to move a part of my band of diggers to the temple ruin M. II, first examined on December 8. The experimental clearing then effected had disclosed some sculptured fragments of manifestly old appearance, and had thus raised a hope of discovering remains which might help to trace the history of the site further back.

Condition of ruin.

The ruin was situated about a mile and a half to the north-east of the fort, and a few hundred yards beyond the line dividing the bare gravel Sai from the area of thickening tamarisk-cones on the north. Near the ruin M. II the ground was still fairly open, and had a clayey surface covered with a layer of fine sand and undergoing wind-erosion. Fragments of pottery, hand-made but of fine well-levigated clay, could be picked up around in plenty. The corrading effects of the wind were strongly marked in the appearance of the conspicuous main structure of the ruin. It presented itself as a solid mound built of sun-dried bricks, oblong in shape but showing no readily recognizable surface features. Two stories, however, could at once be distinguished, and of these the lower one on subsequent clearing proved, as the plan in Plate 31 shows, to measure about 46 feet on its longer sides and a little over 36 feet on the shorter. Its height was about nine feet above what could be determined as the original level of the ground. On the top of this solid platform or base there rose a second story, also oblong in shape but far more decayed, as seen in Fig. 120. Its ground-plan, which could only be made out approximately, measured about 17½ by 15 feet. In its badly broken state, which, as the photograph shows, was partly due to the burrowing of treasure-seekers, it was still over 11 feet in height. The corners of the whole structure were roughly orientated towards the cardinal points.

Decorated niches.

The destruction caused by the erosive force of the wind had left no trace of the plaster covering and decoration anywhere on the upper story, and had also bared the north-west and south-west faces of the base. But along the foot of the north-east and a part of the south-east faces, remains of relievo decoration in plaster emerged above the mass of débris accumulated there. As this was being removed, it was seen that those faces had been uniformly adorned with rows of niches between projecting surfaces of the wall, all heavily coated with plaster. The depth of the niches was about eight inches. The width varied slightly, the average being about two feet. The projections separating the niches were about as broad, and both were raised on a plinth about one foot four inches wide and less than one foot in height. The stucco facing of the base had nowhere survived to a height of more than four feet. But this was sufficient to show clearly the architectural design and the style of the relievo decoration.

Relievo images in stucco.

The niches had once contained stucco statues in relievo, probably a little under life size. Of these one in the centre of the north-east face, as seen in Fig. 120, still showed the legs of a draped

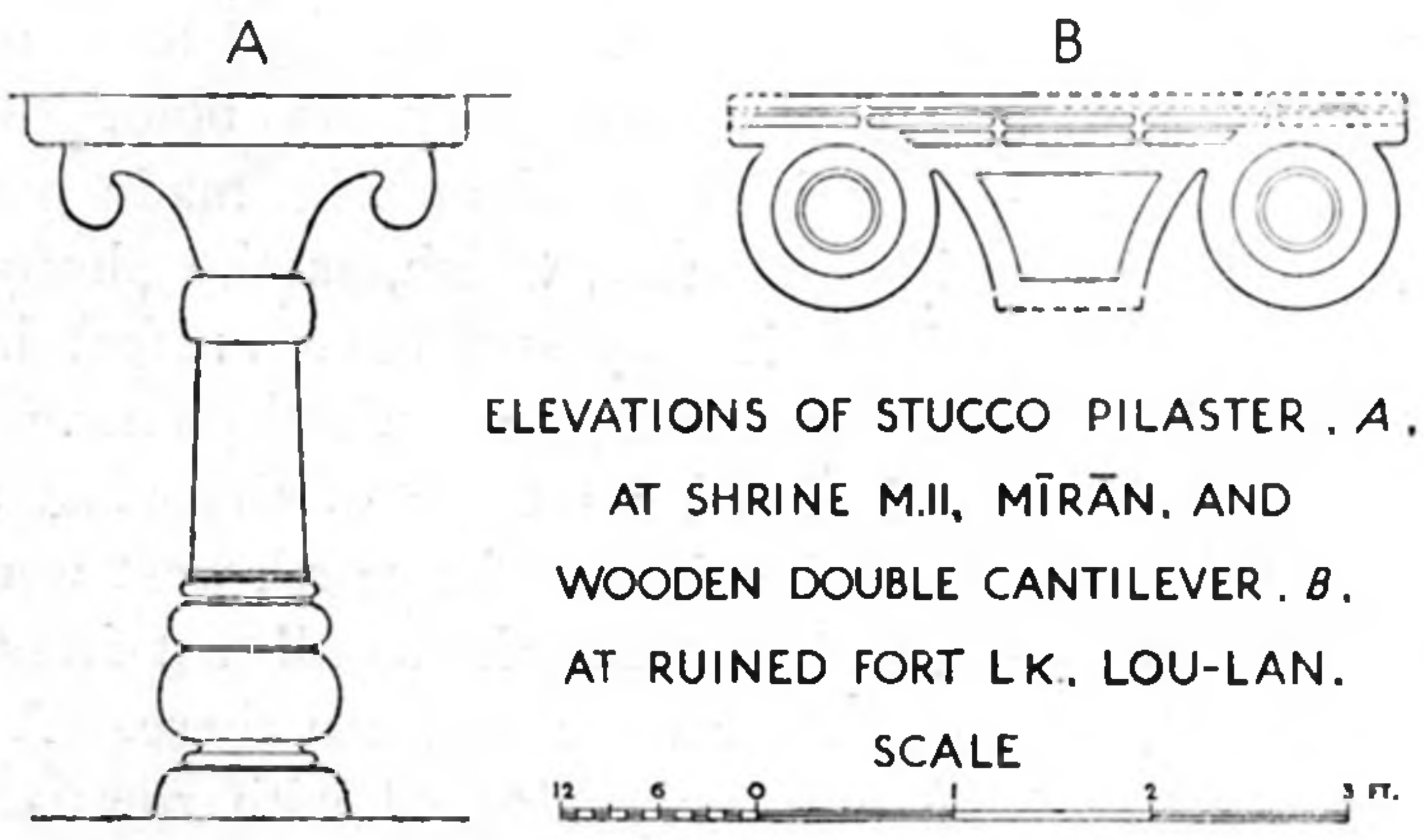
male figure to a height of about two and a half feet, with the remains of the drapery spreading in rich folds sideways from the hips. Of other statues only scanty remains of the feet could be traced in the niches; but detached fragments of stucco, mostly small and badly injured, which turned up in the débris, probably belonged to them. In the case of M. II. 002, which shows the left shoulder with part of the breast and neck, this may safely be inferred from the size. That these statues represented standing Buddhas, resembling in type those of colossal size I had found in great number lining the outer walls of the Rawak Vihāra near Khotan,[1] was confirmed by the subsequent discovery of the head M. II. 006, which in all probability belonged to one of them.[2]

Style of stucco pilasters.

But what struck me greatly from the first was the decoration of the projecting surfaces with relievo representations of pilasters bearing an unmistakable look of descent from Persepolitan models. The impression they gave me of a comparatively early date for the structure has been fully confirmed by the closer examination which has since become possible; for their shape in every essential detail agrees with that of the pilasters in Indo-Persian style which form such a favourite structural element in the decorative art of the Gandhāra relievos. This can be recognized at a glance if we compare the pilasters of Fig. 120 with those relievo representations to which M. Foucher refers where he discusses this element of Indo-Persian style as adopted in Graeco-Buddhist sculpture.[3] Starting from the base, which is circular and narrows towards its top, we have above it a boldly projecting bowl-like knob, followed by two receding mouldings which form the appropriate transition to the slender shaft. This is surmounted by the bell-shaped capital characteristic of the style, and on this rests again a double bracket, not always the same in size, but uniformly ending in turned-down volutes at each end. Surmounting the whole there appears a narrow abacus. Every one of these features, though not all arranged in the same way, can be seen in Figs. 101, 102, 103, 180 of M. Foucher's *L'art du Gandhâra*, which reproduce decorative friezes probably from the bases of small Stūpa models, as well as in many of the relievo representations of Vihāra structures.[4]

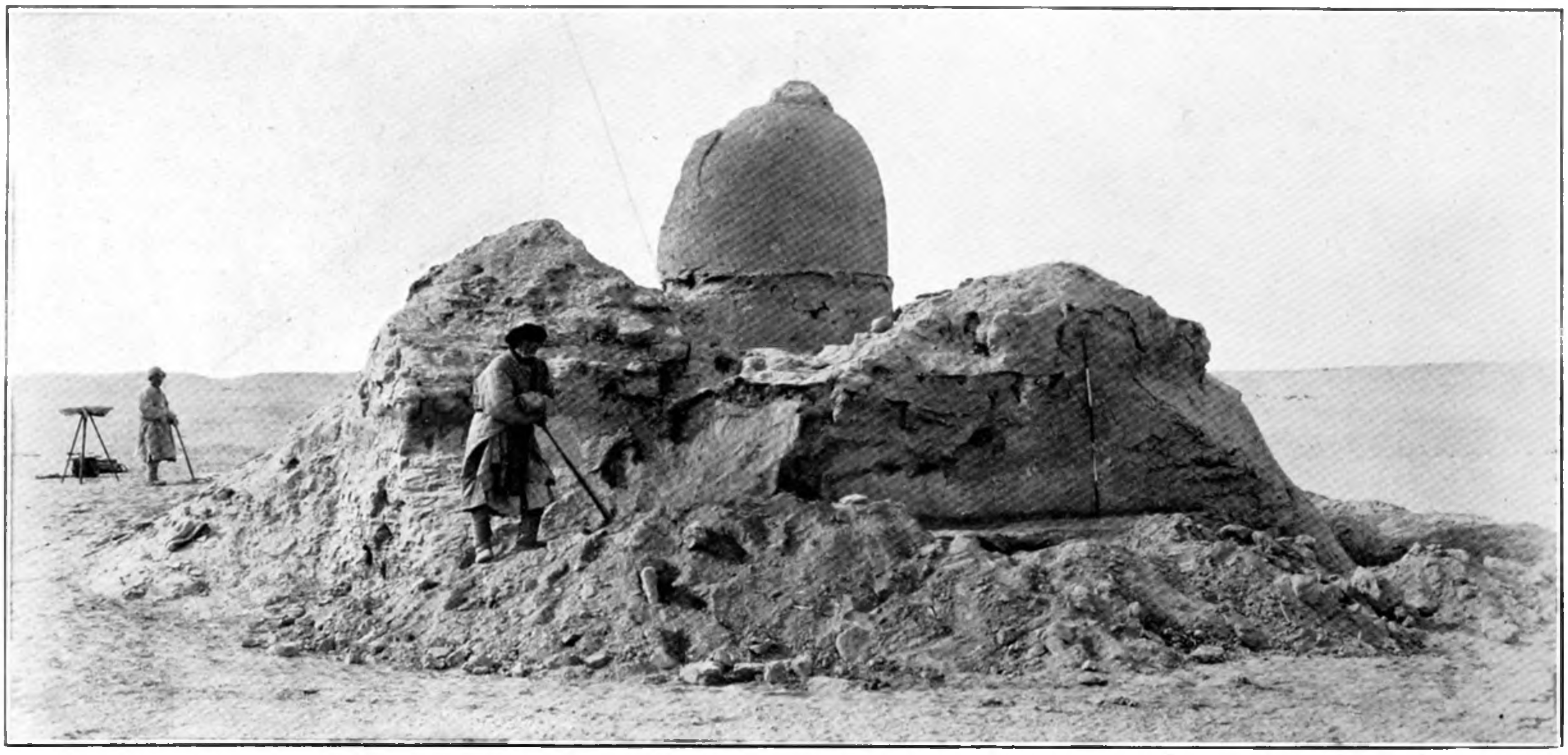
Similar decoration in Gandhāra friezes.

Comparison of the stucco decoration of our base at M. II with the Gandhāra friezes just referred to is particularly instructive in two respects. In the first place, it clearly proves that the architectural design of this decoration, which places relievo images in niches divided by Indo-Persian pilasters, is one directly borrowed from Graeco-Buddhist art. In those friezes we find that the pilasters regularly flank niches, usually surmounted by the Indian horseshoe arch, which contain small relievo images connected with Buddhist worship. That the same design was common also in the decoration of walls belonging to actual Stūpa bases and Vihāras is proved by a multitude of ruined shrines excavated in the home of Graeco-Buddhist art, on the Indian



ELEVATIONS OF STUCCO PILASTER. *A*. AT SHRINE M.II, MĪRĀN, AND WOODEN DOUBLE CANTILEVER. *B*. AT RUINED FORT LK. LOU-LAN.

[1] Cf. *Ancient Khotan*, i. pp. 489 sqq.; ii. Pl. XIII sqq.
[2] See below, p. 489.
[3] Cf. Foucher, *L'art du Gandhâra*, i. pp. 226 sqq., where full references are given to actual examples of such Indo-Persian columns in early Indian architecture and to their prototypes in ancient Persian architecture. See also Grünwedel-Burgess, *Buddhist Art in India*, pp. 16 sq.
[4] Cf. e.g. Foucher, *loc. cit.*, Fig. 76–78, 149; Grünwedel-Burgess, *Buddhist Art in India*, Fig. 1, 81; *Archaeol. Survey Annual*, 1911–12, Pl. XLVII (from my Sahri-bahlōl excavations).

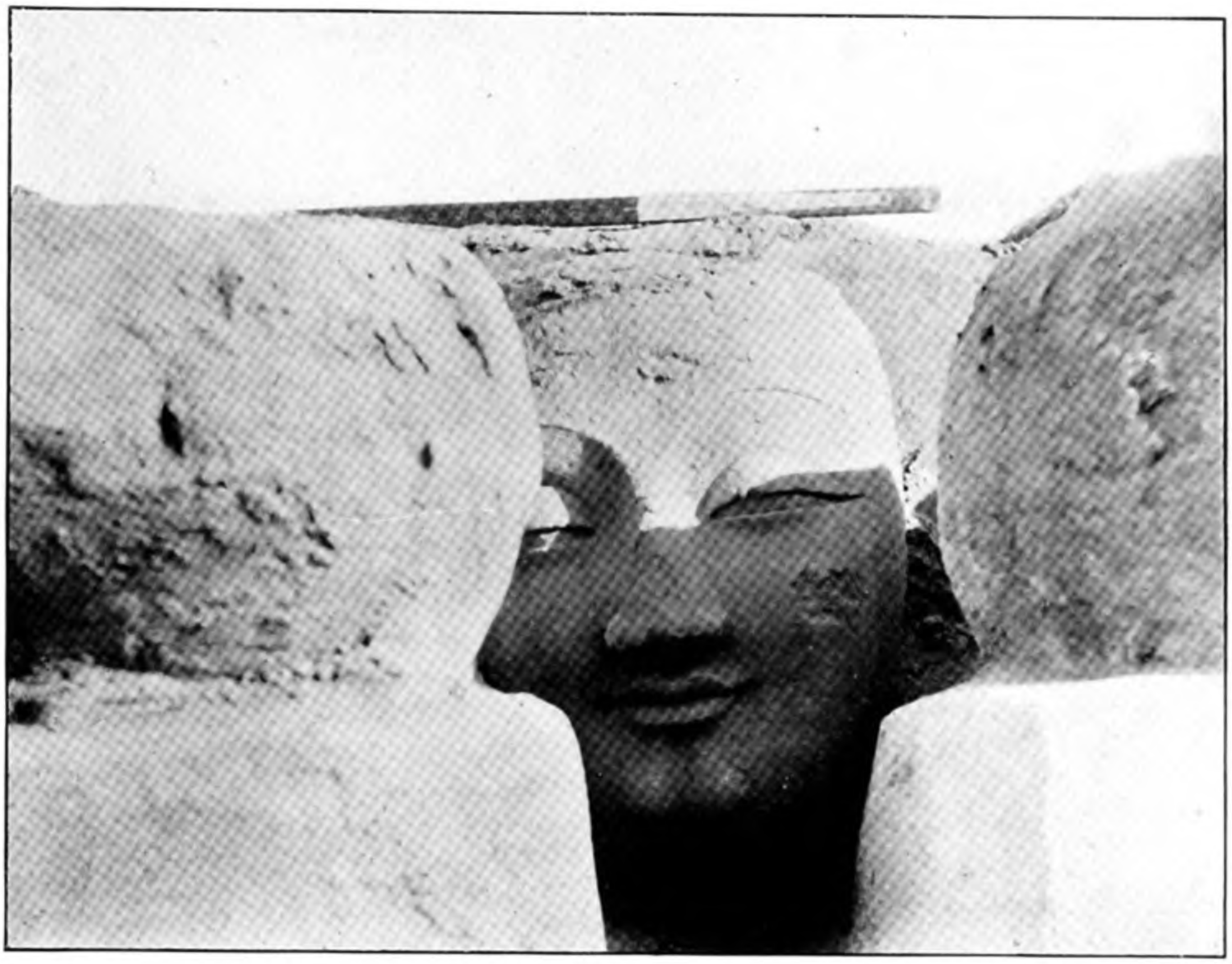


119. RUINED SHRINE M. III, MĪRĀN SITE, AFTER EXCAVATION, SEEN FROM EAST.

120. NORTH-EAST FACE OF RUINED SHRINE M. II, MĪRĀN SITE AFTER EXCAVATION, SEEN FROM EAST.

121. STUCCO HEADS OF COLOSSAL BUDDHAS ii, v, EXCAVATED IN N.E. PASSAGE OF RUINED SHRINE M. II, MĪRĀN SITE.

123. REMAINS OF COLOSSAL STUCCO IMAGES OF SEATED BUDDHAS i–v, EXCAVATED IN N.E. PASSAGE OF RUINED SHRINE M. II, MĪRĀN SITE.



122. STUCCO HEAD OF COLOSSAL BUDDHA iii, AS FOUND IN N.E. PASSAGE OF RUINED SHRINE M. II, MĪRĀN SITE.

124. REMAINS OF COLOSSAL STUCCO IMAGES OF SEATED BUDDHAS iv–vi, EXCAVATED IN N.E. PASSAGE OF RUINED SHRINE M. II, MĪRĀN SITE.

North-west Frontier.[5] In the second place, an indication of distinct archaeological value is to be found in the shape of the double bracket which surmounts the pilasters in the Mīrān ruin.[5a] This accurately reproduces that simplified form of the double bracket, which in a number of Gandhāra relievos replaces the original Persepolitan model made up of a pair of animal figures, usually bulls, crouching back to back.[6] The turned-down volute-like ends, which are such a striking feature of this double bracket in the Mīrān pilasters, appear with equal clearness in the Gandhāra representations, and we have actual examples of them in wooden double brackets which have come to light at Lou-lan sites. Two specimens found at the ancient Chinese station L.A. are seen in Fig. 99. Two others which I discovered in 1914 among the ruins of the sites L.K. and L.M., belonging to the same period, show those voluted ends even more fully developed (see illust. *B*, p. 486). We shall have occasion to discuss further on how these similar features of Gandhāra and Lou-lan sculpture may help us towards an approximate dating of the Mīrān shrine.

Upper portion of base.

No trace had survived of the stucco decoration which the faces of the base must have borne in their upper portion. But from the size of what was left of the standing figure in a niche of the north-east face, it is certain that the niches must have extended upwards. Taking into account the available height, about five feet, it seems probable that the projecting parts of the wall flanking the niches bore a second row of pilasters in stucco. Such an arrangement would agree with the superimposed rows of pilasters seen in the extant Stūpa bases and the walls of Vihāras in Gandhāra.[7] But I am at present unable to mention any instance there in which these repeated rows do not also flank separate rows of niches. It is far more difficult to guess what the badly ruined structure of the second story may have been. Its oblong ground-plan and its position on one side of the base do not lend support to the suggestion that it may have been a Stūpa base, nor does the fact that it retains its rectangular shape up to a considerable height. More probably it may have served as a platform, against the walls of which the principal stucco images of the Vihāra were built after a fashion illustrated by the Endere temple and certain of the cave-shrines at the 'Thousand Buddhas'.[8] Apart from a wooden beam (seen in Fig. 120), which must have been originally inserted in the masonry of this superstructure and which was lying loose among the débris produced by the treasure-seekers' burrowing, nothing was found in clearing the upper story.

Remains of upper story.

Colossal heads in stucco.

Fortunately we fared better in clearing the débris of broken clay and plaster which lay heaped up against the north-east face of the base, and the remains there brought to light left no possible doubt about the Vihāra character of the ruin and its early date. When on my first visit I had probed the débris on that side near the centre, we had come upon a colossal head in soft stucco. Badly damaged as it was, it showed in modelling and proportions the influence of Graeco-Buddhist

[5] Cf. e.g. Foucher, *L'art du Gandhâra*, i. Fig. 80, 81, showing the wall of a Vihāra at Takht-i-bāhī and the base of a Stūpa at Ali-masjid; Stein, *Excavations at Sahri-bahlōl*, in *Archaeol. Survey Annual*, 1911–12, Pl. XLIV, L.

[5a] See illustration *A*, p. 486, prepared from measured drawings.

[6] Cf. Foucher, *L'art du Gandhâra*, i. Figs. 101, 103, 180; pp. 227 sq. For examples where the original form of two crouching oxen is retained by the sculptors of the Gandhāra relievos, see *ibid.* Figs. 102, 76, 77; Stein, *Archaeol. Survey Annual*, 1911–12, Pl. XLVII.

It appears to me probable that the volute-like pendants at the ends are a conventionalized development of the animal's forelegs, which hang downwards in the representations of such Indo-Persian columns, as seen in M. Foucher's Figs. 77, 102. In Grünwedel-Burgess, *Buddhist Art in India*, Fig. 81, we find both the original and the conventionalized forms of this Indo-Persian double bracket represented in the architectural design of the same relievo.

[7] Cf. e.g. Foucher, *L'art du Gandhâra*, i. Figs. 80 (Vihāra wall at Takht-i-bāhī), 81 (base of Stūpa at Ali-masjid); Stein, *Archaeol. Survey Annual*, 1911–12, Pl. L (platform of Vihāra, Sahri-bahlōl).

[8] See *Ancient Khotan*, i. p. 423, Fig. 49; below, chap. xxv. sec. i. The ruin *E* excavated by me in 1912 at Sahri-bahlōl shows a curious resemblance in the oblong ground-plan of its two-storied platform, which originally seems to have belonged to a Buddhist Vihāra; see *Archaeol. Survey Annual*, 1911–12, pp. 114 sqq.; Pl. XXXIV. But the ruin has suffered too much by later adaptations and otherwise to offer any safe indication.

sculpture quite as plainly as the large series of relievos excavated at the Rawak Stūpa in 1901. Fig. 121 shows it on the right. Now, too, very soon after the systematic removal of the heavy masses of débris was begun along what proved to have been the north-east side of a passage enclosing the whole central portion of the shrine, there emerged towards its northern corner the colossal Buddha head, M. II 007, reproduced in Plate XLVI and seen also in Fig. 121 on the left. It lay on a level fully three feet above the original floor, and, having fallen with its face downwards on a layer of sand and disintegrated clay, had suffered less injury. It still retained in patches the white surface slip covering the face, and much of the small spiral curls painted black and marking the hair. Apart from the conventional representation of the hair, this head, too, very closely resembled in type the stucco Buddha heads found at Rawak.[9]

Stucco material of heads.

The head measured fully nineteen inches in length from the chin to the remaining portion of the crown. As the material consisted here, as in the other sculptures of the shrine, merely of coarse clay mixed with straw, the safe removal of this heavy and friable mass of plaster presented no small difficulty. Fortunately the wooden core, though rotten, survived within, and the surface plaster, if as soft as the rest, yet derived some consistency from a plentiful admixture of hair. It is due to this and the great care used in the packing that the transport to London was successfully accomplished. A third colossal Buddha head was subsequently discovered in front of the seated torso iv; but this, lying with its face upwards and embedded in hard débris, was too much battered to retain details of features, though there could be no doubt about the identity of its type with the rest.

Colossal seated Buddhas.

The question of the origin of these colossal heads was definitely solved by the complete clearing of the north-east passage of the shrine. This, a little over ten feet wide, proved to have been lined along its outer wall with a row of colossal stucco images seated with cross-folded legs which, judging from the pose of the hands and the drapery in the surviving torsos, could be recognized with certainty as Buddhas. Fig. 123 shows the northern portion of the row (torsos i–iv) and Fig. 124 (torsos iv–vi) the southern. Though altogether the bases of eight statues could be traced, only six among them (numbered i–vi in the plan, Plate 31) retained torsos, and none of these showed more than the crossed legs with remains of the folded hands. The statues measured 7 feet to 7 feet 3 inches across the knees, which reached to a height of a little over a foot. The stucco bases occupied by the torsos were 7 feet 6 inches long and 2 feet 4 inches wide, and rose to a height of 1 foot and 4 inches. The spaces dividing them were only 6 to 7 inches across in front, but widened towards the wall behind.

Arrangement of drapery.

The pose of these colossal seated Buddhas must have been throughout that of the *dhyāna-mudrā* or 'pose of meditation'. But only in torsos iii–v did enough survive of the hands laid one upon another in the lap to prove this. The drapery showed in all that conventional arrangement which we find already fixed for this typical attitude in the Gandhāra sculptures, and which the relievos found at Rawak had abundantly illustrated.[10] In all the torsos the central portion of the drapery hung from below the hands in three concentric folds arranged in a festoon-like fashion which is seen both in the Gandhāra and in the Rawak relievos. But whereas in i and ii the folds appear as boldly-raised plaits about an inch wide, they are replaced in iii–v by narrow double grooves. In every case the edges of the robe below these central folds are represented with a crimped wavy outline, just as the edges of the drapery on certain relievo figures of the Rawak Stūpa court.[11] The folds over arms and knees are everywhere indicated in a conventional

[9] Cf. *Ancient Khotan*, ii. Pl. LXXXI–LXXXIV.

[10] Cf. e.g. Foucher, *L'art du Gandhâra*, i. Figs. 242, 246, 247, etc.; Grünwedel-Burgess, *Buddhist Art in India*, Figs. 112, 116; Stein, *Archaeol. Survey Annual*, 1911–12, Pl. XLIV, XLVII, XLVIII, etc.; *Ancient Khotan*, ii. Pl. LXXXII, LXXXIII.

[11] Cf. *Ancient Khotan*, ii. Pl. XVI (xlix–liii), Pl. XVII (lvii–lxiii).

way by more or less parallel double grooves. The tendency towards this representation of folds by shallow grooves can be traced also in certain of the Rawak statues and elsewhere.[12] The outside layers of the stucco, where exposed in these torsos, contained a considerable admixture of vegetable fibres or hair, and in iii and iv portions of the facing plaster still retained that red colour wash which regularly appeared in the Rawak relievos.

Finds between image bases.

Remembering that at the Rawak Stūpa court I had found the wall-spaces between the colossal standing Buddhas utilized for smaller images, I cleared the interstices between the big statue bases with special care. But only between i and ii did I come upon the base of a small image, with remains of feet and drapery which might have belonged to a relievo figure about three feet high. The space left free between ii and iii had, however, proved useful by affording safe shelter to the colossal head which had once belonged to the third statue. It was found, as the photograph in Fig. 122 shows, firmly wedged between its own base and that of its right-hand neighbour, still upright and with the front portion almost uninjured. In expression and certain details of modelling, e.g. the divided chin, it differed from the other colossal heads, which, by their place of discovery, had to be assigned to statues ii, iv, and v respectively.

Other sculptured relics.

The colossal head of iv, which had fallen face upwards just in front of its torso, was, as already stated, found in a badly-battered condition. But, curiously enough, on the left knee of this statue we came upon another stucco head of a Buddha, M. II. 006, of life size, which, except for the peeled-off surface, had survived in fair preservation. Judging from its size, it may safely be supposed to have belonged to one of the stucco images that formerly filled the niches on the opposite passage wall. Similar observations made in the course of my excavations at the Rawak Stūpa suggest the explanation that the head had been removed to this position of safety by the hand of one of the last worshippers when it threatened to fall off.[13] Two other life-size heads, one found in the north-east passage and the other in the south-east, are also likely to have dropped from images in the niches, but were too much injured to merit removal. The origin of the two sculptured fragments, M. II. 0012–13, belonging to statues of small size, could not be determined. Nor is it possible to guess the use of the two wooden half-balusters, M. II. 009–0010, which turned up in the débris of the north-east passage together with some timber pieces of uncertain character. The absence in the ruined shrines of any signs of destruction by fire deserves notice here, as well as the indication furnished by the small fresco fragment, M. II. 004, that its walls were once decorated in colours.

Fragments of palm-leaf Pōthī.

The most important of the small 'finds' in the ruin was made when, on clearing the débris in front of the image base iv, there were discovered a mutilated folio and a fragment of another from a palm-leaf Pōthī, M. II. 0011 (Plate CXLIII), written in Sanskrit. Its Brāhmī characters were at the time recognized by me as of an early Gupta type. The mutilated folio, measuring about 6½ by 2 inches, and showing five lines on either side, lay quite close to the image base, embedded in stucco débris which had evidently fallen from the crumbling statue above. The position in which it was found pointed clearly to its having been deposited on the base as a votive offering after the fashion which I had first observed in the ruined shrines of Dandān-oilik and the Endere fort, and which so many manuscript finds at the Khādalik temples had since illustrated.[14] The Pōthī, according to Dr. Hoernle's statement,[14a] seems to have contained a grammatical text, and the material made it certain that it had been written in India. Judging from the palaeographic features of the writing, which make it appear somewhat older than the Bower Manuscript from Kuchā, Dr. Hoernle was inclined to place its date about A.D. 400. There is no special reason to believe

[12] Cf. *Ancient Khotan*, ii. Pl. LXXXVI, LXXXVII; also relievos from Kighillik, ibid. Pl. LXXX.

[13] Cf. *Ancient Khotan*, i. pp. 492 sq.

[14] Cf. *Ancient Khotan*, i. pp. 261 sq., 424 sq.; above, pp. 155 sqq.

[14a] See below, Appendix *F*.

that the manuscript was of great age at the time of deposition, and still less is it likely that a leaf of such brittle substance could have lain thus exposed for long before the débris came down to cover and protect it.

Remains of enclosing passage.

The chronological evidence furnished by this find has its bearing on the question of the date when the shrine was abandoned. Before, however, considering this, I may complete the description of the surviving structural features. To the south-west and north-west the solid brick mound of the base, as already stated, had lost practically all traces of its original decoration in stucco, and close to it the ground had been lowered by erosion more than four feet beneath the original level. Nothing could be ascertained here as to the enclosing passage of the Vihāra. On the south-east, scanty remains of an outer wall, standing only to the height of a few inches, showed that the width of the passage on this side was merely 3 feet 8 inches. Considering that the north-east side of the structure must have been most exposed to the destructive power of the winds, it was a puzzle at first why the shrine should have retained the sculptured decoration of the enclosing passage just there. But this was soon solved when continued excavation showed that adjoining the outer wall of the passage, here 3 feet 6 inches thick, was another massive brick wall running parallel to it at a distance of less than five feet.

Outer enclosure on N.E.

This wall, together with the débris accumulated in the intervening space, had helped to ward off wind-erosion. But, together with the structure which it appears to have enclosed, it had suffered so badly that the character of the latter could no longer be ascertained. It might have been a monastic building or chapel court. Curiously enough, I found the space between the two walls just referred to, and behind the colossal torsos iii and iv, filled with solid masonry to a length of close on seven feet. I cannot explain its purpose unless it possibly served to carry stairs giving access to the upper story of the main shrine. Nowhere did I come upon any indication how this would be otherwise approached. But obviously all points relating to the superstructure can be subjects for nothing more than conjecture.

As seen in the plan (Plate 31), this outer wall turned at right angles to the north-east, and there adjoining it was a small massive structure of which the walls on one side still rose to a height of about four or five feet. Measuring approximately 19 feet square outside, it enclosed a circular chamber, about 13 feet in diameter and once probably covered with a dome. To my eye the remains, badly decayed as they were, clearly suggested one of those small domed temples, or Vihāras, square outside and circular within, with which I had become familiar from the Swāt Valley to Kashmīr.[15] Unfortunately no archaeological relics of any kind had survived within the broken walls, nor could I trace any within a small and still more decayed cella, of which the foundations had escaped wind-erosion, some six yards to the north-east.

Ruin used as herdsmen's shelter.

When I subsequently cleared the narrow space left between the southern ends of the two parallel walls behind the north-east passage of the main shrine, I found it filled to a height of seven feet with the dung of sheep and horses. But the only discovery made was a large roll of a strong, if coarse, material apparently woven of goat's hair. A similar crust of hard dung was found to have also formed over portions of the broken walls close by, thus furnishing evidence that long after the decay of the shrine its ruin must have been used as a shelter by shepherds and others, while the ground in its vicinity retained vegetation fit for some sort of grazing. In the case of the Niya and Lou-lan sites I have already had occasion to note exactly corresponding proofs of a transitional

[15] For illustrations of shrines of this type and for an illuminating discussion of their architectural character, whether used as Buddhist Vihāras or as Hindu temples, see Foucher, *L'art du Gandhāra*, i. pp. 120 sqq., 142 sq., and particularly Figs. 49, 50, 54.

period through which the once inhabited area appears to have passed before becoming the desolate arid waste that it is now.[16]

Periods of construction and abandonment.

This leads us to the important question, still remaining to be examined, of the approximate periods to which the construction of this shrine and its abandonment are likely to belong. That the construction must have preceded the Tibetan occupation of the site will, I think, have been made sufficiently clear by the observations already recorded about the actual remains. That the abandonment also preceded it is made very probable by the total absence of any finds suggesting Tibetan character or origin. But it may help us to more definite chronological conclusions if we briefly review the available indications as a whole.

Chronology of architectural decorations.

In the first place, some safe guidance can be derived from the architectural decoration of the Vihāra base. We have already seen that this is closely linked up by its Indo-Persian pilasters with Graeco-Buddhist models of Gandhāra. Now it should be specially emphasized that this architectural element can also be traced at other ruined sites of the Tārīm Basin, and in specimens which seem to indicate definite chronological limits for the Mīrān pilasters both upwards and downwards. On the upper side we have, as already shown above, the important testimony of the wooden double-brackets, ending in down-turned volutes, from three different ruined sites of Lou-lan. They prove that the very shape of this member, as displayed by the pilasters of M. II, must have been prevalent in actual decorative use throughout the Lop region as early as the third century A.D. Considering the very conservative fashion in which the Buddhist art of Eastern Turkestān has treated the forms derived from Graeco-Buddhist models, we might well be in doubt as to the downward limit of the period during which this particular shape of the Indo-Persian double-bracket remained current, were it not for certain finds, made among the ruins of Endere and the Domoko tract, which prove that by the T'ang period both this double-bracket and the Indo-Persian column bearing it had already undergone an unmistakable change.

Development of double-brackets.

Taking the double-bracket first, we have the very interesting specimen in wood, F. II. ii. 01, from the site of Farhād Bēg-yailaki, some ten miles north-north-west of Khādalik, which is shown in Plate XVII and well repays attention. Here we have before us an unquestionably later development. In it a modified, but yet clearly recognizable, form of the volute-ended Indo-Persian double-bracket is surmounted by a second identical in all essential features with the double-brackets characteristic of the Niya Site, of which specimens are reproduced in Plate XVIII and also in *Ancient Khotan*, Plate LXIX.[17] We also find the same combination in the pair of wooden double-brackets, Kha. v. 003. a, b (Plate XVII), from the Khādalik temple ruins. Here, too, the lower portion represents a modified and later form of the Indo-Persian double-bracket, the voluted ends appearing as a particularly striking feature both at top and bottom. The upper portion is a double-bracket of the Niya Site pattern, treated very plainly and lacking the floral carving of the under-surface at the ends. Comparing the Farhād Bēg-yailaki and Khādalik specimens, it seems to me that the former stands distinctly nearer to the models from which both the constituent portions are derived. It is certain that the site of Khādalik was abandoned in T'ang times, towards the close of the eighth century.[18] As to the ruins of Farhād Bēg-yailaki, we shall have occasion to show below that they probably belong to the centuries immediately preceding the T'ang period.[18a]

Indo-Persian columns.

The columns which carried those Farhād Bēg-yailaki and Khādalik double-brackets were not found in either case. But the latter site at least furnished a sample of the probable appearance of these columns in the lathe-turned wooden pillar found in Kha. ix and seen in Fig. 42.[19] That its

[16] See above, pp. 240, 400.

[17] For a full and lucid analysis of these Niya Site double-brackets, Mr. Andrews' descriptions of N. XX. 002, 003, in *Ancient Khotan*, i. p. 413, should be consulted.

[18] Cf. above, p. 159. [18a] See below, chap. XXI. sec. ii.

[19] See above, p. 162.

tapering shape and the rich globular mouldings of its base are derived from the Indo-Persian model in the Gandhāra relievos is quite clear. But it is equally obvious that it represents a distinctly later development of this model than our Mīrān stucco pilasters. The same observation applies with equal strength to the two fine wooden columns of Indo-Persian style which were brought to light by my renewed excavations in one of the halls belonging to the main quarters of the Endere fort (E. III. iv), and which are shown in Fig. 70.[20] In these we find the addition of fillets up the shaft, marking later elaboration, but we can recognize even more clearly the essential continuity of the Indo-Persian type both in the base and in the bell-shaped capital.

Evidence of Endere columns.

The archaeological evidence furnished by these Endere columns carved in wood has its special value for the dating of the Mīrān shrine, because we know for certain that the structure containing them must have been built between A.D. 645 and 719, and probably nearer to the former date.[21] If we make due allowance for the time which is likely to have passed before the Indo-Persian column at Mīrān, still seen with all the essential features of its Gandhāra prototype, could develop into this later form of Endere and Khādalik, the conclusion seems justified that the construction of the Mīrān Vihāra M. II cannot safely be put later than the fifth century A.D.

Evidence of sculptured remains.

With the downward chronological limit thus inferred the evidence of the sculptured remains may well be reconciled; for their type shows no essential difference in style or technique from that so abundantly represented in the relievos of the Rawak Stūpa, which may be dated with considerable probability from a period between the fourth and seventh century A.D.[22] But it must be borne in mind that, on the one hand, the sculptured relics of M. II are unfortunately very scanty, and that, on the other, conservative adherence to the models derived from Graeco-Buddhist art appears to have remained a strongly marked characteristic of Buddhist sculpture in Eastern Turkestān throughout its existence. Hence, no argument based upon style of sculpture could claim much independent weight in determining the date of the construction of the shrine.

Abandonment of shrine.

It is obvious that this must be kept quite distinct from the question of the time when the shrine was deserted and allowed to fall into ruin. The only piece of positive evidence available is the fragment of a palm-leaf Pōthī in Sanskrit, already mentioned. As it must have been written within the fourth or fifth century A.D., it supplies a safe upper chronological limit. As regards the lower, I feel inclined to attach some importance to the total absence of any relics in Tibetan writing, and to draw from it the inference that the abandonment took place at some period before the Tibetan occupation about the middle of the eighth century. It is true the evidence in this case is of a purely negative kind. But it seems to me to gather some additional weight from the fact that at the ruined temples of Khādalik and Endere, where the Brāhmī manuscript remains were of distinctly later type than the M. II Pōthī leaf, there were found with them plentiful Tibetan leaves and fragments which proved that Buddhist worship had continued in these shrines under Tibetan domination. Thus the clearing of this Mīrān ruin fully confirmed me in the belief that the site had a far older history, and in a way it prepared me for the much more striking proofs of this which my subsequent excavations revealed.

Section II.—THE STŪPA CELLA M. III AND ITS WALL-PAINTINGS

Ruined mound M. III.

On January 31, while the 're-burying' of the quarters, etc., dug up in the Tibetan fort still kept most of the labourers busy, I started work at the group of small ruined mounds rising above the bare gravel Sai about a mile to the west-north-west of the fort (Fig. 111). When, on my first approach to the site, I had cursorily inspected a cluster of five of them found just east of the raised

[20] Cf. above, p. 279. [21] Cf. above, pp. 276 sqq. [22] See above, p. 130.

the dome had suffered on the south. As the elevation reproduced in Plate 32 shows, the present height of the Stūpa was close on 13 feet above the cella floor. That originally it is likely to have been considerably higher is proved by the remnant, visible in Fig. 119, of what I take to have been a square pedestal, corresponding to that discussed in connexion with the Stūpa rock carvings of Chitrāl.[1] The peculiarity of this Stūpa lies in the circular shape of the base instead of the square one usually found in the Stūpa ruins which I examined elsewhere in the Tārīm Basin. It may be assumed that the choice of the round base, amply attested among the Stūpas of India and the North-west border, was due to considerations of the space available within the small circular cella.

Arrangement of Stūpa base.

On the lowest division of the base, 9 feet in diameter and 9 inches high, there is placed a receding drum, 1 foot 6 inches high, terminated both below and above by a uniform series of mouldings. Then follows another plain division, 9 inches high and of the same diameter as the lowest, and above it a succession of small step-like mouldings, with a total height of less than 6 inches. From this rises the cylindrical member, about 2 feet 3 inches high, which carries the dome, both being 6 feet 8 inches in diameter. The projecting frieze-like moulding, about 4 inches thick, which intervenes between drum and dome, is a feature seen with equal clearness in the Stūpa carving of Pakhtōridīnī, the wooden Stūpa models of Niya and Lou-lan, etc.[2] It is difficult to make sure whether, and in what way, the disposition just described was intended to give expression to that arrangement of the base in three stories which we have reason to consider as prescribed by tradition for the Stūpas of the Tārīm Basin.[3] But it is worth pointing out that the circular base of the Stūpa in the neighbouring shrine of M. v reflects such an intention much more clearly. The plaster surface was fairly hard, and strengthened along the projecting mouldings by layers of twigs inserted between the masonry courses. Low reliefs, showing what evidently is meant to represent leaves of the Bodhi tree and the *Triratna* symbol, could be made out on the plaster of the drum (Plate 32) and were the only traces of ornamentation on the Stūpa.

First discovery of painted dado.

That it was different with the interior wall of the cella became increasingly certain during the afternoon of the same day that the clearing of the circular passage proceeded, and fragments of painted stucco kept cropping up rapidly from the débris in its north-eastern and south-eastern segments. Yet when the digging had there reached a level of about four feet from the floor, and the topmost portion of a cleverly painted dado, showing the heads of fine winged angel-like figures, began to disclose itself on the wall (Plate XL, XLI), my surprise was so great that at first I found it hard to believe my eyes. Not here, close to the desolate salt-wastes of Lop-nōr and among the ruins of what seemed the very last outpost of Buddhist Central Asia towards China, could I have expected to come upon what looked like late classical representations of Cherubim. And what had these graceful heads, which seemed to recall figures familiar to early Christian art, to do here on the walls of what was beyond all doubt a Buddhist sanctuary?

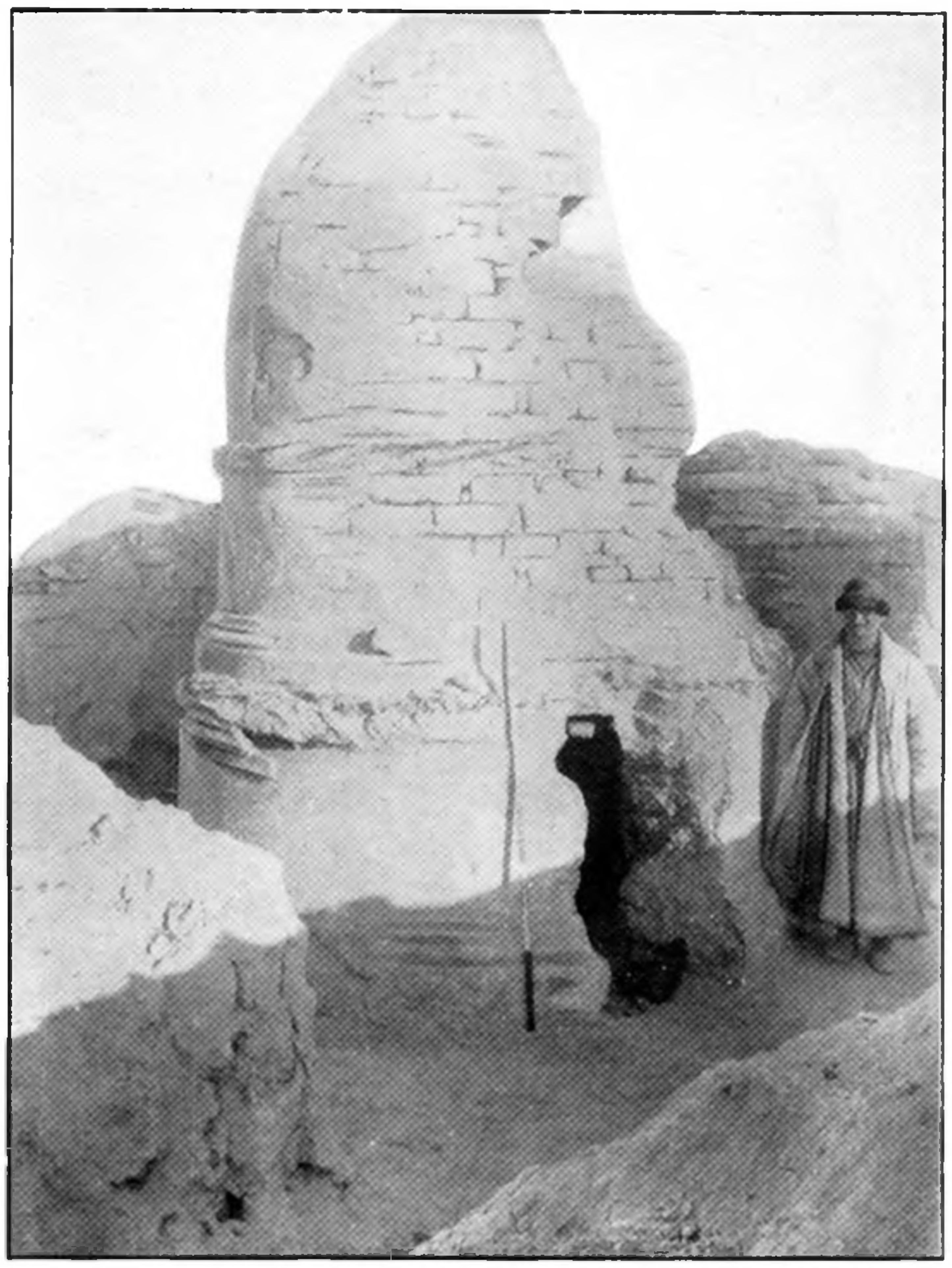
Winged angel-like busts.

As I eagerly cleared head after head with my bare hands, in order to prevent any chance of damage, in the surviving portions of the dado along the north-east and south-east walls, I could not long remain in doubt that the classical influence was far more marked in these frescoes than in any remains of ancient pictorial art which I had so far seen or knew of, whether north or south of the K'un-lun and Hindukush. There was much in the vivacious look of the large fully-opened eyes and in the expression of the small dimpled lips and the slightly aquiline nose to call up in my mind recollections, gathered long years before in the distant West, of those fine Levantine-looking portrait heads preserved for us on painted panels from Fayyûm mummies of the Hellenistic period. A faint suggestion of Semitic strain in the features presented by some of the heads seemed to support the

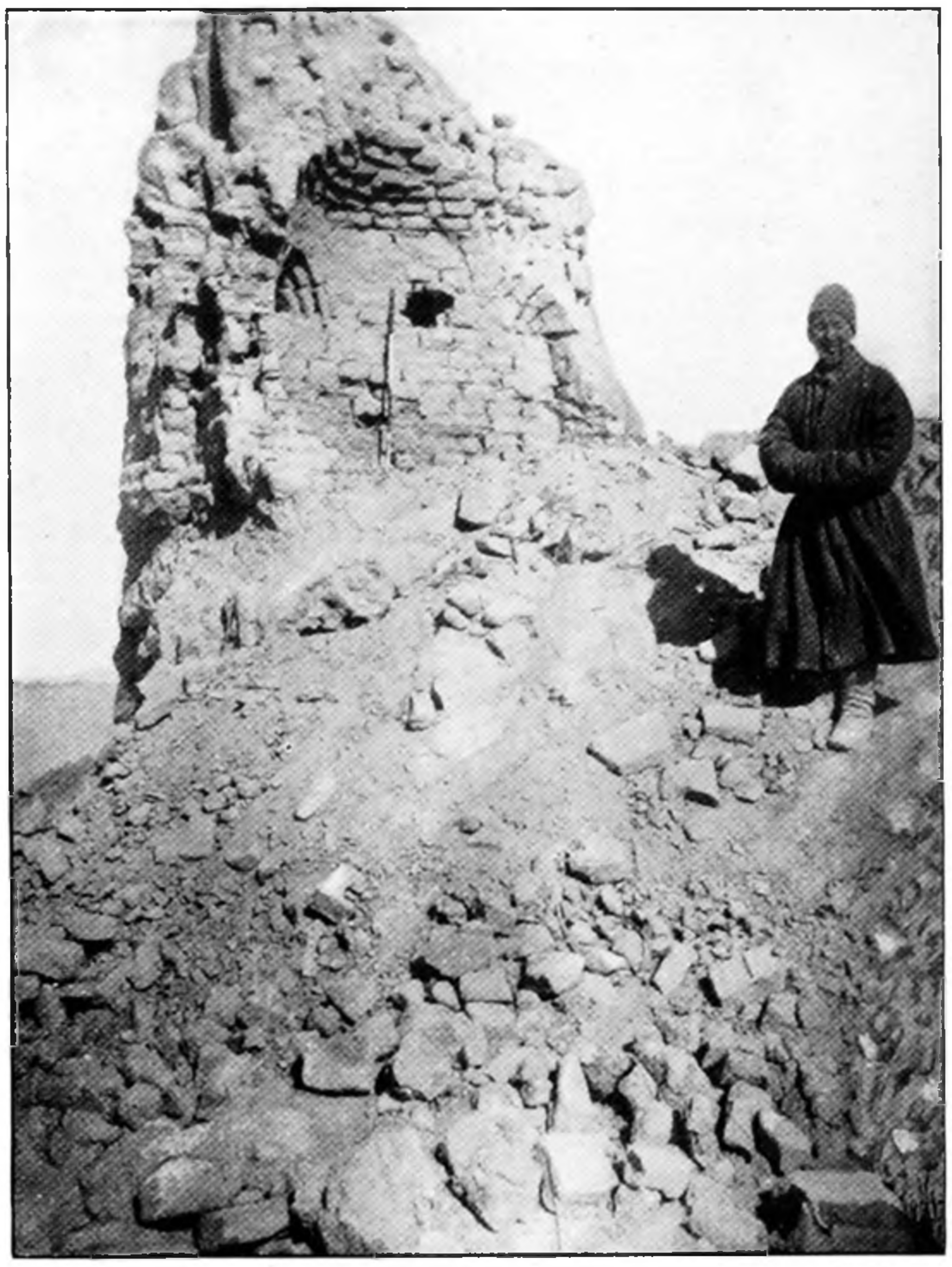
[1] Cf. above, p. 38; Pl. 2.

[2] See above, pp. 38, 247; Pl. 2, XXXII.

[3] Cf. *Ancient Khotan*, i. pp. 83 sq.; above, pp. 37 sq.

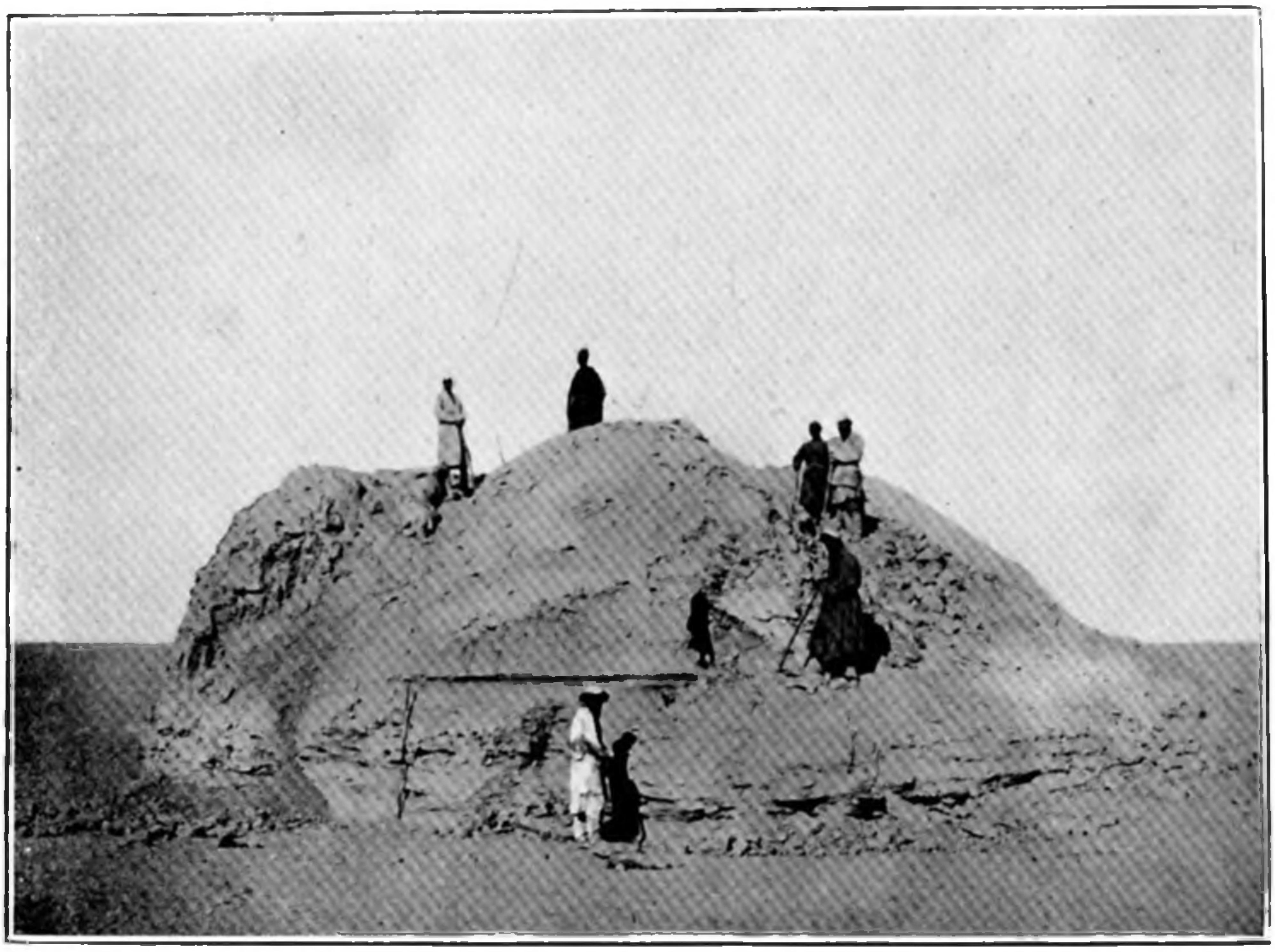


125. STŪPA AND CIRCULAR PASSAGE IN RUINED SHRINE M. III, MĪRĀN SITE, SEEN FROM S.W.

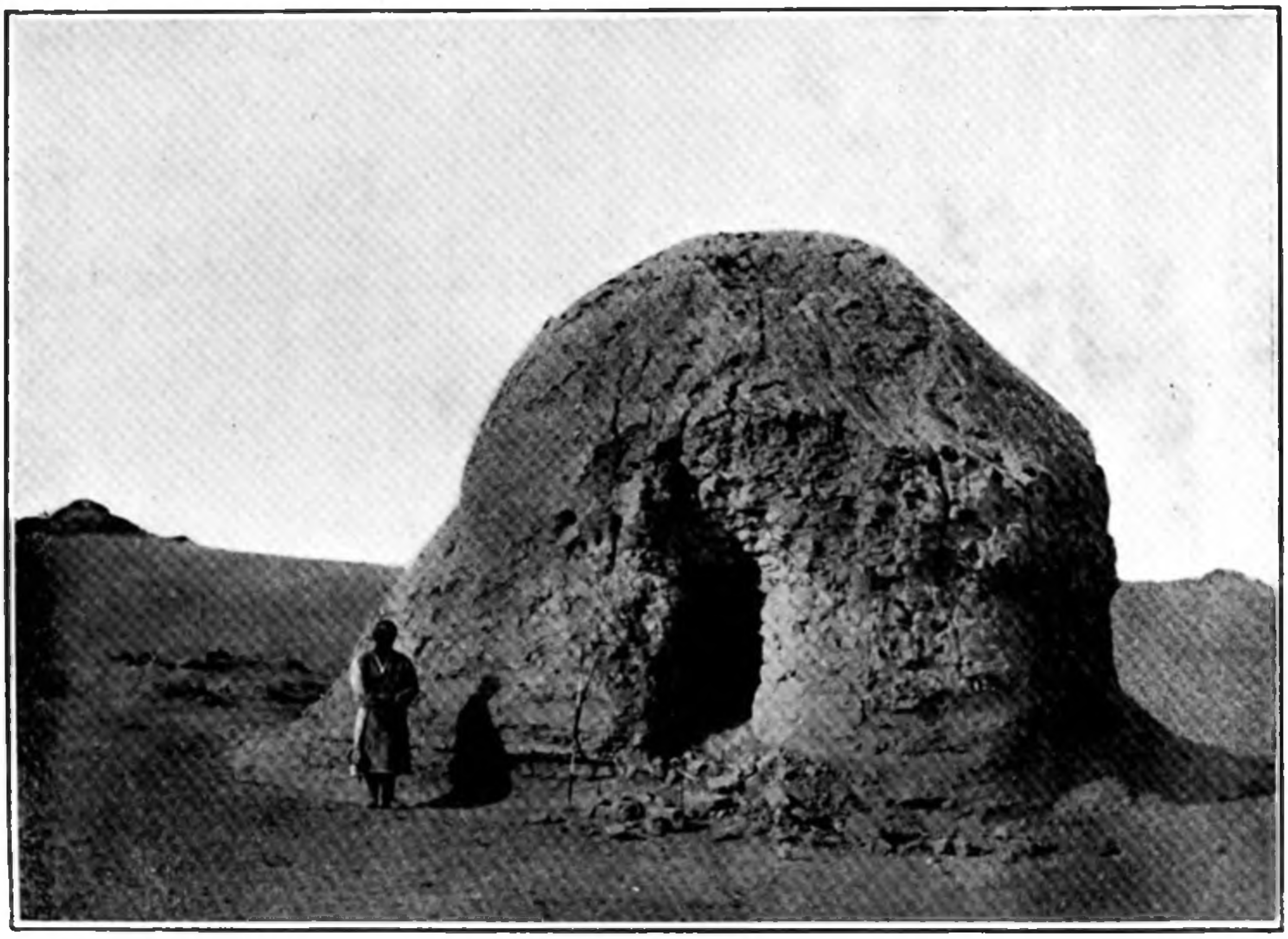


126. REMAINS OF RUINED DOMED STRUCTURE M. X, MĪRĀN SITE, SEEN FROM S.W.

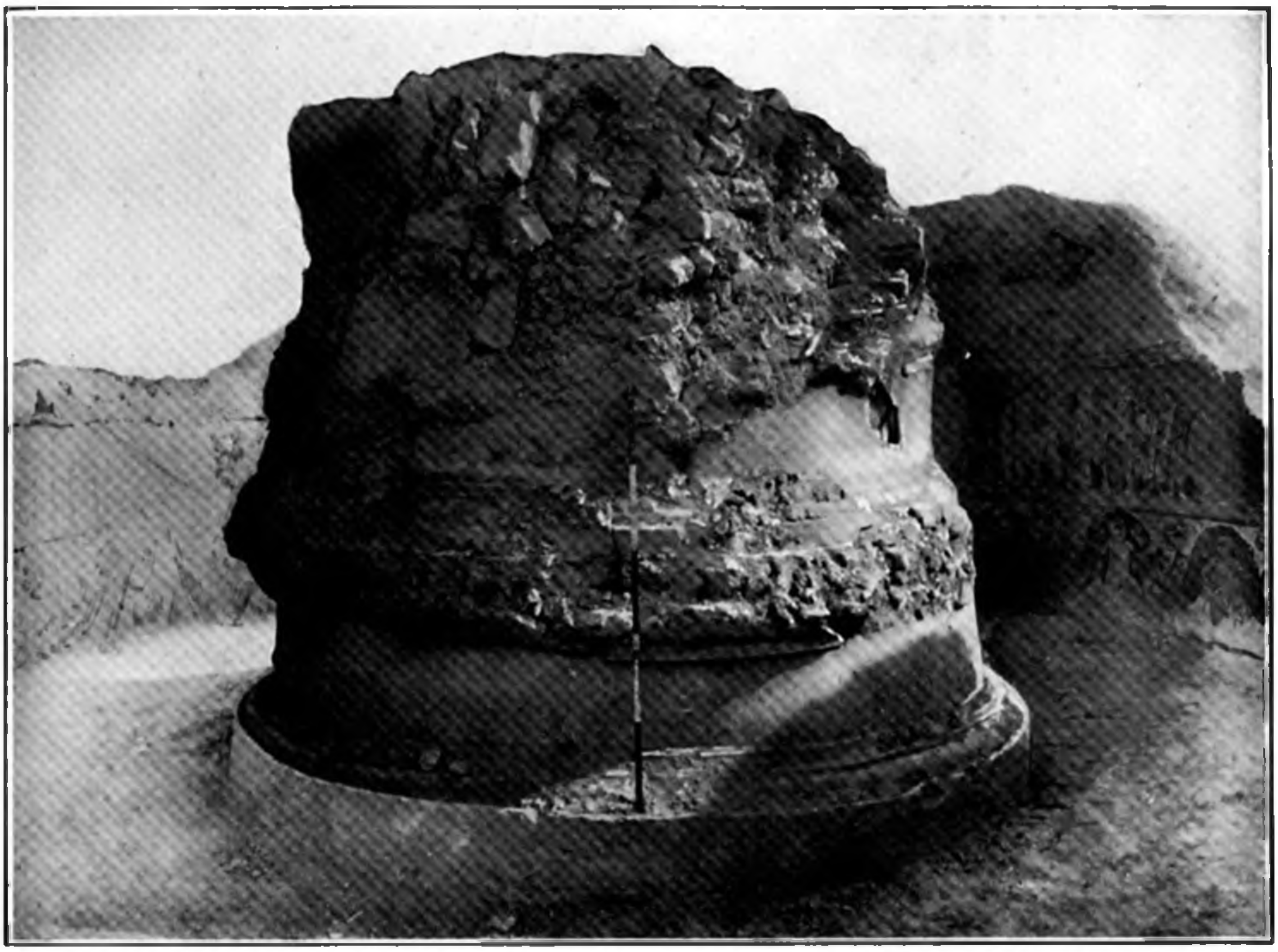
127. FRESCO FRAGMENTS FROM FALLEN FRIEZE OF RUINED SHRINE M. III, AS UNEARTHED IN NORTH-EAST QUADRANT OF PASSAGE.



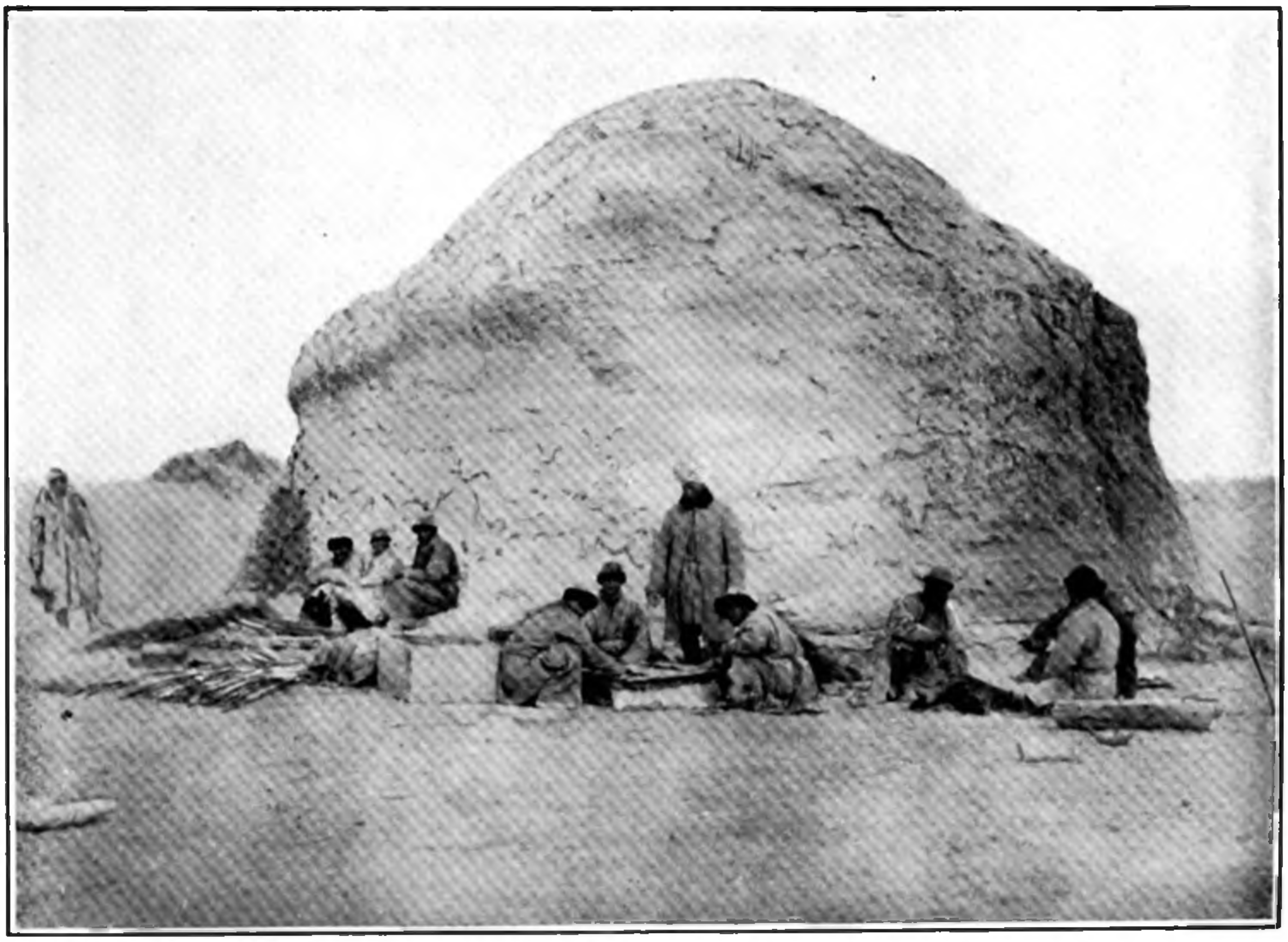
128. RUINED SHRINE M. V, MĪRĀN SITE, SEEN FROM SOUTH-EAST BEFORE EXCAVATION.



130. RUINED STŪPA M. VII, MĪRĀN SITE, SEEN FROM SOUTH.



129. STŪPA AND CIRCULAR PASSAGE OF RUINED SHRINE M. V, MĪRĀN SITE, AFTER EXCAVATION, SEEN FROM WEST.



131. RUINED STŪPA M. VI, MĪRĀN SITE, SEEN FROM SOUTH-WEST.
Men packing frescoes in foreground.

impression of a direct linking with the Hellenized Near East. There was much in the conventional uniformity of the design, and also in the rapid execution of details, to suggest the brush of a decorator repeating a pattern of distant origin, fixed both in motif and composition. And yet an expression of vigorous artistic feeling seemed still to survive in the lively directness of gaze and pose, and in the simple ease of the outlines shown even by the graceful upward curve of the short fluttering wings. Puzzled as I was by much that this first rapid inspection had disclosed, I could at least feel quite certain that work of this type could not possibly have been produced in the time of Tibetan occupation or in the period of Chinese predominance immediately preceding it. I was still wondering how to account for the distinctly classical style in the treatment of these 'angels' and to understand the purport of what seemed like a loan from early Christian iconography, when a fortunate discovery supplied definite palaeographic evidence to throw light on the question of date.

Kharoṣṭhī inscriptions on silk banner.

From the rubble of broken mud-bricks and decomposed plaster filling the south-western segment of the circular passage there were recovered in succession three large pieces of finely woven buff silk, M. III. 0015 (Plate XXXIX), which proved to have formed part of a votive banner or streamer, about four feet long in its present torn condition and originally over one foot wide. It was decorated with two inwoven bands of narrow lines, in harmonizing tints of red and green, running its whole length. Written along and over a red line which divides the intervening space were nine short inscriptions in Kharoṣṭhī, five of them complete. Their neat clerical handwriting is not different from that found in the great majority of the Kharoṣṭhī documents on leather and wood from the Niya Sites, or in the more carefully penned Kharoṣṭhī records from Lou-lan. Hence the conclusion seems justified that the deposition of the inscribed streamer must date back to approximately the same period to which those documents belong, viz. the third and early fourth century A. D. I was struck from the first with the fact that the ink had remained remarkably fresh and black even without the protection which careful folding in the case of the leather documents, and wooden envelopes in the case of the tablets, had provided. This, combined with the excellent condition of the silk material, where not torn, makes it very unlikely that the gift of the inscribed silk streamer could have preceded the abandonment of the shrine by any long time. And thus I was soon led to infer, as the simplest explanation of the obviously early character of the wall paintings, that the shrine M. III belonged to an older settlement, which had been deserted about the same period as the sites of Niya, Endere, and Lou-lan. For the subsequent reoccupation of Mīrān in Tibetan times the observations made at the ruins of Endere furnish an exact parallel.

Decipherment of Kharoṣṭhī inscription.

The recurrence of the same words at the end of each of the short Kharoṣṭhī inscriptions had helped, even at the time of discovery, to suggest to me that they were of a votive character. This has been fully confirmed by the decipherment which my learned collaborator, the Abbé Boyer, was kind enough to undertake, and the results of which were published by him in 1911.[4] It has proved that each of these short inscriptions contains a prayer in Prākrit for the health of a certain person, some of them also for that of his family, and that the phrase used in expressing it (*arughadachinae bhavadu*, i.e. Skr. *ārogyadakṣiṇāyai bhavatu*) is identical with that regularly found in Indian epigraphic records of the Kuṣana period where they indicate the benefits hoped for by pious donors in return for their gifts. Of the seven names preserved, three have been recognized by M. Boyer as plainly Indian, viz. *Asagoṣa*, *Caroka*, *Ṣamanaya*, corresponding to the Sanskrit forms *Aśvaghoṣa*, *Cāruka*, and *Śramaṇaka*. I believe that he is equally right in classing the two female names *Friyāna* and *Firina* as of Iranian origin, *Fryāna* being the well-known Avestic designation of a Turanian family.[4a] *Mitraka* might be either Indian or Iranian, according to the

[4] See Boyer, *Inscriptions de Miran* in *Journal Asiat.*, 1911 (mai-juin), pp. 418 sqq.

[4a] Cf. Justi, *Iranisches Namenbuch*, p. 106, s. v.

greater or lesser weight we may be inclined to attach to the spelling. The seventh name *K'ibhila* remains uncertain at present.

Miscellaneous finds in débris.

In the eastern part of the passage I was obliged to stop digging at the approach of twilight, when pieces of frescoed plaster, large and small, had begun to emerge from the débris. They had evidently peeled off from higher parts of the wall of the little rotunda, and lay closely packed against the painted dado, as seen in Fig. 127, which shows a subsequent stage of the clearing. It was obvious that the greatest care and much time would be needed for the recovery of these fallen fragments of fresco. But in the west and south-west segments of the passage the treasure-seekers' destructive operations had allowed nothing of the fresco decoration of the walls to survive, and here clearing could be continued without risk. By nightfall it had yielded a number of interesting relics. There were long strips of finely-woven dark-red silk, M. III. 0064-65, which, judging from the stucco found adhering to them, had evidently been pasted along the mouldings of the bases of images such as might have been placed at the entrance of the shrine. The small capital of carved wood, M. III. 0021 (Plate XLVII), which with its leaf ornament recalls a 'Coptic' example, may also come from the same place. The cylindrical block of wood, M. III. 0024 (Plate XLVII), resembling the double hub of a wheel, is an object of uncertain use, which may possibly have belonged to the tee on the top of the Stūpa.

Artificial flowers.

Very curious relics were found of what may have been votive offerings of the last worshippers at the shrine. We came upon a number of artificial flowers, M. III. 0013, 0027, skilfully cut out of strong cotton and silk fabrics in a variety of colours, and cleverly made up with wooden pegs and tufts of thread to represent stalks and stamens. The way in which these flowers had been used was made clear by the discovery of several decorated pieces of stout cotton material, which had served as a background upon which to fix them. The largest of them, M. III. 0026 (Plate XLVIII), was covered with a thin coat of plaster painted dark blue, and still retained artificial flowers stuck into it with small pegs, as well as leaves and sprays of similar fabrics fixed direct to the plaster surface. The whole was apparently meant to represent a sacred lake with floating lotuses and water-plants. In other pieces, M. III. 0025. a-c, 0028, the background is painted direct on the fabric, stout cotton or silk, and still retains the holes in which the flowers had been fixed.

Material of frescoes.

The first day's successful work in this unpretentious ruin had revealed unexpected, and therefore all the more fascinating, glimpses of the influence of classical pictorial art reaching even the shores of Lop-nōr. It meant an illuminating discovery, but also the rise of new problems. Among them there was one which had to be faced at once and which was of a practical nature. For the fine wall-paintings now about to rise from their grave there was no chance of thorough study and protection but by removal. To effect this and the distant transport in safety was bound to prove a task of very serious technical difficulty. The remains of wall-paintings, whether still in their original position or lying as detached fragments of varying size among the débris, were all executed in tempera on a stucco backing which consisted of nothing but a layer of friable clay mixed with short straw of cut reeds.[4b] It showed ominous cracks even where it still adhered to the wall, and it had become very brittle. This was particularly the case with the fallen pieces, though the thickness of the plaster was here often greater. Both the detaching and the handling of these fragile panels of stucco demanded the utmost care, and the method and means for safely dealing with them had still to be improvised.

Clearing, etc., of mural paintings.

The whole of February 1 passed in securing the requisite timber from the jungle of Mīrān and in turning it into the materials, such as planks and boards, immediately wanted for beginning

[4b] For Sir Arthur Church's chemical analysis of painted stucco specimens from M. III and M. V, showing a plaster of Paris coating with colours applied in tempera, see Appendix *D*.

the difficult work of removal. But it was necessary also to complete the clearing of the circular passage and to make a careful record of the condition and place in which the various remains of the wall-paintings were found, before attempting their rescue. In my Personal Narrative I have described the trying physical conditions in which this preliminary work of note-taking and photographing, as well as most of my subsequent tasks here, had to be effected, under icy gales ever blowing from the north-east, and with constant crouching in cramped positions imposed by the want of space.[5] Here I may at once record what the detailed examination, made both during and after the clearing, showed as to the disposition of the surviving wall-paintings and the probable character of the decorative scheme as a whole.

Arrangement of painted dado.

As already mentioned above, the circular passage within the rotunda (Plate 32) had been lighted by three windows, besides the entrance passing through the west wall now completely destroyed. The windows, which were found to be almost exactly orientated towards the north, east, and south, reached down to 2 feet 8 inches from the floor and had a width of 2 feet 3 inches. The four segments into which the enclosing wall was divided by windows and entrance were decorated below with a painted frieze or dado. This, on the north-east and south-east segments, where alone the walls still throughout retained their plastered surface high enough, consisted of six lunettes; from the hollow of each there rose the head and shoulders of a winged male figure of nearly life size (Plates XL, XLI). Nothing of the dado had survived on the south-western segment; but on the north-west, near the north window, were the badly effaced remains of two lunettes containing angels' heads. It may thus be considered as certain that the same decorative scheme was used for the dado all round the interior walls of the rotunda. It is in accordance with this that the surviving sections of the dado have been marked in the plan (Plate 32) with numbers running from i to xxiv on the right and left respectively of the north window.

Lunettes of dado.

The rows of lunettes were united by a black band, nearly an inch wide, which ran the whole length of the dado, separating it from the paintings on the main wall above. The top of the dado as thus marked reached a height of 3 feet 10 inches from the floor. The length of each lunette, as measured along the top or chord line, was about 2 feet 2 inches, and necessarily presented a slightly curved surface. Including the series of bands bordering the lower curved edge, each lunette was of an average height of about 1 foot 6 inches. Below the row of lunettes there stretched a horizontal band about 9 inches wide, filled with eight or nine wave lines in black, and once, so far as could be judged from the damaged surface of the plaster, extending also upwards into the spandrels left between the lunettes. This band, poorly preserved in most places, was curiously suggestive of the sea. Below it the surface of the plaster was too much perished to show any traces of painting, if there ever was any so low down.

Remains of paintings above dado.

Leaving the figures represented in this dado of 'angels' and all questions connected with the style and technique of their pictorial treatment to be discussed further on, I may next turn to what had survived of the paintings once adorning the upper faces of the wall. Only the scantiest remains of such frescoes—to use a conveniently short, though here technically inaccurate term—could still be traced in their original position. What little there was left of painted plaster surface above some of the lunettes of the dado showed only the feet of a few small figures with the lower parts of their garments. Such remnants can be seen in Fig. 127 above the fallen pieces of plaster hiding lunette v, and also above the angel ii in Plate XL. Other traces of this kind are recorded in my notes above lunettes iv, ix, and x; in no case, however, did the perished plaster permit of removal.

Fallen fragments of upper wall-paintings.

It was not from the badly broken walls but from the débris accumulated at their foot, within the north-east and south-east segments of the passage, that I was able to recover the fragments of

[5] See *Desert Cathay*, i. pp. 462 sqq.

tempera painting which help us to form some idea of what the decoration of the higher parts of the wall may have been like. The largest and best-preserved of these fragments were found leaning in three closely packed layers against that part of the wall which retained the lunettes iv–vi of the dado. The photograph in Fig. 127 shows them cleared of smaller débris, but before removal. Their preservation was very probably due to their having slid down at a time when sufficient sand and soft débris had already accumulated within the passage to stop the fall of the pieces of fresco as they broke loose from the wall through one or another cause. It seemed reasonable to assume that the innermost panel (now seen in M. III. 003, Plate XLII) was the first to be stopped in its fall, and that it represented a portion of the frieze nearest to the dado. It is scarcely necessary to point out that the wall from which these painted plaster panels had slipped must have remained standing for some time after; otherwise its fall would have been bound to crush these frail pieces of plaster into dust at its foot. It was probably débris from the vaulting which helped to bury them safely before the wall, too, fell.

Several painted friezes.

That the decoration of the wall above the dado must have included more than one painted frieze can be safely concluded, not merely from the analogy of the fresco friezes subsequently discovered in the neighbouring rotunda M. v, but also from actually surviving fragments which clearly prove the existence of at least two friezes in M. III. Along the top of the large panel M. III. 003 (Plate XLII), which we shall have to discuss presently, there runs a black band with the remains of a grey one above it. Now in the fragment M. III. 0018 (Plate XLIV) we find the foot of a human figure resting on a band of white which itself is succeeded below by a grey and then a black one. M. III. 0036 (Plate XLV), too, shows a white and then a grey band below the feet of two figures, the edge further down being broken. It is clear that in all three pieces we have remnants of the same triplicate band which divided two upper friezes.

Removal of fallen fresco fragments.

In my Personal Narrative I have fully described the difficult operations by which I succeeded, at the expense of much care and personal exertion, in rescuing the broken pieces of friable painted plaster once belonging to these fresco friezes and in packing them so safely that they subsequently survived, without further appreciable damage, all the risks involved in transporting them over thousands of miles across deserts and high mountain ranges.[6] I had entertained little hope at the time that these brittle panes of mud plaster could be brought to safety, over such a distance and such ground, in a condition still permitting of careful arrangement and study. I had all the more reason to feel gratified at the result of my efforts when, three years later, Mr. F. H. Andrews, with the help of my second assistant, Mr. Droop, was able to put together from these *disjecta membra* panels so large and well preserved as those shown in Plates XLII and XLIII, besides a considerable number of smaller ones, some of which are illustrated in Plates XLIV and XLV.

Interest of painted frieze fragments.

The successful rescue of these fragments has enabled expert eyes, such as those of Mr. F. H. Andrews and M. A. Foucher, to observe many points which are of interest for the history of Buddhist art in Central Asia, and of which my notes and photographs, even if taken under less hampering conditions, could not possibly have preserved an adequate record. All the same, I should not attempt to deal at once with these scanty remnants of the painted friezes, were it not for the definite evidence which the exactly analogous fresco frieze discovered in shrine M. v furnishes as to the general scheme of the composition, and did not the subjects treated in them point so plainly to the connexion with Graeco-Buddhist art, as known to us from the sculptures of Gandhāra. If we previously examine these frieze fragments, it will be easier for us afterwards to make sure of the true descent and significance of the fascinating 'angels' in the dado which might otherwise puzzle us.

[6] See *Desert Cathay*, i. pp. 463 sqq.

It is this relation to Graeco-Buddhist art which invests the fresco remains of the Mīrān shrines with exceptional interest, however fragmentary their condition. No remains of pictorial art corresponding in date and origin to the Graeco-Buddhist sculptures of Gandhāra have as yet come to light on Indian soil, and unless the cave-temples of Bāmiān, or ruins as yet unrevealed below the soil of Bactria, may prove to have preserved them, the earlier stages of an art development which was destined to exercise a far-reaching influence throughout the history of Central-Asian and Far-Eastern painting are likely to remain for ever lost to us. Whatever archaeological evidence we possess at present seems to justify the belief that in the Mīrān frescoes we have the nearest approach to that conjectured Gandhāra prototype of Central-Asian Buddhist painting which can no longer be traced in its original home. It is this which makes it worth while to examine with care even what mere fragments can teach us. They deserve full attention all the more since, I think, we may also trace in them links with Orientalized forms of Hellenistic art further west. Lost pictorial art of Gandhāra.

Some general observations as to the technique of these wall paintings may conveniently find their place here. They are all painted in tempera on what the chemical analysis made by Sir Arthur Church has proved to be a thin coating of plaster of Paris, skilfully spread over a backing of loess.[7] A pale pinkish pigment, derived from ferric oxide, appears to have been distributed over the white plaster of Paris surface, while it was still wet, in order to serve as a ground colour. The presence of size in the various pigments used above this could not be definitely determined, but it seems likely. It should be noted that the method here used of preparing the ground by a thin layer of plaster of Paris tinted with a ferruginous pigment appears to have continued in the Khotan region down to T'ang times, as Sir Arthur Church's analysis has proved it also for the 'frescoes' of Khādalik.[8] Technique of wall-paintings.

I have already given the reasons which prove that the wall decoration must have included at least two friezes encircling the rotunda above the height of the dado I still found *in situ*. It is to the lower one of these two friezes that we can with considerable probability ascribe the panel M. III. 003, reproduced with its well-preserved colours in Plate XLII. On account of its somewhat large size and the interest presented by its subject and details, it provides a very convenient introduction to our review of the rescued remains of these paintings. The two pieces now united in the panel, measuring over 3 feet 3 inches in length and over 1 foot 10 inches in height, were discovered in a detached condition at the foot of the dado, below the lunettes iv and v. Their position there, nearest to the wall and behind two other layers of painted plaster fragments (including M. III. 002, 004), as seen in Fig. 127, makes it probable that they had fallen from the part of the wall immediately above the angels. The broad black band which runs along the top of the extant portion of the background, and near which are the remains of a grey one, belonged, as already mentioned, to the triplicate border dividing the two friezes. The method by which the joining of the badly broken pieces of this panel was effected, and which was also employed for the preservation of the other fresco remains from Mīrān, is fully explained in the note below.[9] This method owed Painted panel, M. III. 003.

[7] Cf. below, Appendix *D*.

[8] See below, Appendix *D*.

[9] In order to protect the brittle pieces of painted plaster from further injury and to render their safe fixing and handling possible, it was necessary to replace the friable clay and straw at the back of the smooth surface layer which bears the tempera pigments by a fresh backing of plaster of Paris. This removal of the coarse original backing was absolutely necessary as a preliminary safeguard. Otherwise the salts with which, like all the clay remains of these ruins, it had become permeated in abundance would have exuded on the coloured surface under the influence of the moisture absorbed from the plaster of Paris that was needed to hold together and strengthen the whole. But without this preparatory measure it would also have been impossible to make the separated surface pieces join accurately or the many serious cracks, etc., close up again. This very delicate operation of first removing the clay backing from the several detached fresco pieces which formed part of the same panel, and then bringing their surface layers into close contact in the correct position, was effected

its origin and successful application mainly to the technical skill and devoted care of Mr. F. H. Andrews. In illustration of the most satisfactory results which he secured by it, I may invite a comparison between the condition of the main figure in panel M. III. 003, as originally discovered at the foot of the wall (see Fig. 127), and the appearance of the same Buddha figure in the joined-up panel reproduced in Plate XLII. The big cracks visible in the photograph, showing the condition of the piece on discovery, have closed up so well in the panel as finally secured that they have become almost imperceptible, and yet the original painted surface has been left entirely unaltered.

Height and ground colour of frieze.

The known original position of this panel furnishes us with a very useful indication of the size of the frieze to which it belonged, just as its subject does of the probable character of the composition adorning it. From the size of the figures and the fragments of the border that survive, it can safely be concluded that the height of the frieze is likely to have been approximately similar to that of the frieze next to the dado which I found still partially surviving on the walls of the adjoining rotunda M. v, viz. between three and four feet. The vermilion colour of the background, a kind of Pompeian red, which we see in M. III. 003, was certainly common to the friezes of both shrines. To these points of agreement I may add at once two others of more importance which we shall see clearly proved presently: close similarity in style, and the fact that both friezes treat of scenes drawn from Buddhist iconography. All these indications combined are sufficient to create a presumption that the general scheme of grouping is likely in both friezes to have exhibited the same close correspondence which we shall further on be able to trace as regards the decorative scheme governing the design of both dados.

Analogy of painted frieze in M. v.

Now in the case of the frieze decorating the rotunda M. v, as seen in the photographs Figs. 134–40, it is certain, firstly, that the scenes depicted in it extended as a continuous band round the walls, except where the latter had two openings giving light and access to the circular passage of the cella, and, secondly, that the scenes were all meant to illustrate incidents of the same Jātaka story. In the shrine M. III, with the plan of which M. v shows otherwise the closest agreement, the circular wall of the interior was, as we have already seen, divided by a door and three windows into four equal segments. Only from two of these, on the north-east and south-east, were fragments of the friezes once surmounting the dado recovered. But even these suffice to throw light on two points of importance. In the first place, they show that the paintings within each segment formed a continuous composition. In the second place, a closer examination of the fragments makes it appear very probable that the scenes represented in at least the lower of the friezes all belonged to the same Buddhist legend, whether taken from the life of Gautama Buddha or from one of the Jātaka stories relating to Buddha's previous births.

Composition unbroken.

The first point is established by evidence which, though negative, seems none the less

at the British Museum during the years 1910–11 by Mr. F. H. Andrews and, under the direction of his artist eye, by my second assistant Mr. J. P. Droop, with extreme care and skill.

It may be useful to record here the exact technical method followed. The painted fragments were placed with their surface downwards on strong panes of plate glass. After the backing of clay and straw had been slowly removed by careful scraping, etc., until only the smooth surface layer of plaster of Paris remained, the several pieces belonging to one panel could be moved into the position requisite for correct junction by the guidance of the image which was reflected on a mirror placed at a suitable distance below the glass pane. Care was taken to use, for all the larger panels, panes of glass bent exactly to the curve which the known diameter of the rotunda indicated for the surfaces originally occupied by them. After the several pieces had thus been reassembled in their correct position, a thin layer of plaster of Paris was spread over the whole as a new backing. This was subsequently strengthened by a wire grating connected with a wooden frame, and finally an outer and thicker layer of plaster of Paris was applied, in which the grating became embedded. After having been treated in this manner the panels could be handled with perfect ease and safety.

It ought to be clearly recorded that the slightest attempt at supplementing missing bits of the original painted surface or at other 'restoration' of any sort has been rigorously avoided.

conclusive. Among all the pieces of painted plaster from the friezes which came to light in the débris of the circular passage and which are recorded in the Descriptive List below,[10] there is not one indicating a division of the wall-paintings into distinct panels or fields by decorative architectural motifs or otherwise. This is in full agreement with the surviving part of the frieze in the southern hemicycle of the cella walls of M. v. There a series of independent but consecutive scenes unfolds itself combined into one unbroken composition to illustrate the Jātaka legend of King Vessantara.

Combination of several scenes.

The point is one of considerable interest and deserving of special notice for two reasons. The first is that this continuity of composition in the wall-paintings is in striking contrast with the treatment of similar legendary subjects in the plastic art of Gandhāra. There we find that the relievo representations of scenes which form part of the same legendary cycles are, at least in the vast majority of cases, divided into separate panels or compartments, even though they are there also ranged into regular friezes.[11] We are not concerned here with the origin and explanation of this peculiarity in the design of the sculptured friezes of Gandhāra. Unfortunately the total absence of pictorial remains of Graeco-Buddhist art makes it impossible for us to ascertain whether it applied there also to wall-paintings. But it is certainly noteworthy—and that is the second reason for my calling attention to the point—that the combination of several scenes into one continuous field, which is well known to later classical art, according to a very competent authority originated in the Hellenistic Near East.[12] Even to the system which is traceable there of explaining the different scenes depicted in this fashion by means of short painted inscriptions the frieze of M. v, as we shall see, offers an exact parallel.

Same figures repeated in frieze.

Comparison with the frieze of M. v is also helpful with regard to the second point of interest I have mentioned above. That in any case the lower of the friezes in M. III is likely to have contained scenes taken from a Buddhist legend is indicated in general by the character of the large piece, M. III. 003 (Plate XLII), to be discussed presently, and that of the panel M. III. 002 (Plate XLIII). This shows figures drawn to the same scale, and may therefore be assumed to have belonged to the same frieze. Now it is significant that among the fragments recovered there are several which certainly belonged to replicas of figures appearing in these larger pieces. Thus we have the rows of Buddhist monks representing disciples in M. III. 003 repeated with exactly the same treatment in M. III. 005 (Plate XLIV). The head of the princely worshipper, seen on the right of M. III. 002 (Plate XLIII), is found repeated with exactly the same type, treatment, and head-dress no less than five times (M. III. 006, 0031–32, 0037, 0056; Plates XLIV, XLV). Of the head seen in the interesting representation of a well-dressed personage, M. III. 009–10 (Plate XLV), we find similarly obvious replicas in the two fragments, M. III. 0033–34 (Plate XLV). It is clear that in the representation of scenes belonging to the same story there must arise constant necessity to introduce certain principal actors again and again, and to indicate their identity by close reproduction of type, treatment, etc. We find this necessity strikingly illustrated by the Vessantara Jātaka frieze of M. v, and hence the presence of replicas also in the frieze of M. III, demonstrated by the fragments just quoted, may well be accepted as an indirect proof that the subject was here, too, a story from the life of Buddha in his last or an earlier incarnation.

[10] See below, pp. 539 sqq.

[11] Cf. Foucher, *L'art du Gandhâra*, i. pp. 182, 266 sqq., where references will be found to the abundant relievo friezes illustrating the above observation. For rare instances of a continuous composition, see *ibid.* i. p. 603. That this arrangement of relievo scenes in compartments, as it were 'in metopes', was not primarily due to technical necessities arising from the size of the stone materials to be worked, is obvious from the friezes which decorate the bases of very small Stūpas and are carved on single slabs; see e.g. *ibid.*, Figs. 70–72.

[12] Cf. J. Strzygowski, *Orient oder Rom*, p. 39.

Section III.—REMAINS OF THE PAINTED FRIEZES OF M. iii

Standing Buddha in panel M. iii. 003.

Having dealt in the foregoing section with the general character of the fresco decoration in the shrine M. iii, we may now proceed to the examination of the portions and fragments that I was able to bring back from it. In the panel M. iii. 003 (Plate XLII), which has served as a starting-point for our introductory remarks, we see a Buddha standing, dressed in a dark purple-brown robe which is passed over both shoulders. It is almost of that *kaṣāya* colour which Indian tradition has since early times prescribed for ascetics and mendicant teachers. From the circular halo and the characteristic top-knot of hair, partly broken, it may be concluded with certainty that the teacher is meant for a Buddha. But until the legend which the painted frieze illustrated is identified, it is impossible to make sure whether Gautama Buddha or some earlier 'Enlightened One' is intended. His right hand is raised in what I first took to be the *Abhaya-mudrā* or 'pose of protection'. But, as Dr. Venis has been good enough to point out, the thumb instead of being held up straight, as it ordinarily is in this *mudrā*, is incurved. Touching the second joint of the third finger, i. e. the eighth on the hand, it seems intended to suggest that the teacher is expounding either 'the eight-fold way' or 'the eight Pāramitas'. The left hand is held low in front and evidently supporting drapery.

Figures of Buddha's disciples.

Behind the Buddha and to his left there are six disciples, ranged in two rows and wearing robes which display a variety of colours from bright green to dark red. Their shaven heads mark them as leading the life of monks. The one on the left end of the upper row and nearest to the teacher has his right shoulder bared and carries in his raised right hand a white Yak-tail fan or *Caurī*, the traditional emblem of sovereign power in Indian iconography. As M. Foucher first pointed out to me, this figure may be assumed to represent Ānanda, the favourite disciple of Gautama Buddha, if the latter is intended by the haloed teacher. The dark conical mass which is seen on the right of the disciples, studded with red and white flowers and poppy-like leaves of greenish-grey, represents part of a tree, as is clearly proved by a comparison with the trees appearing on the frieze of M. v in Figs. 136–38. Against the background of the tree appears the upraised right arm of a figure, otherwise lost, grasping a handful of white buds or flowers, apparently in the act of throwing them. This background and a corresponding one with well-drawn leaves, of which a portion remains behind the Buddha's right hand, make it clear that the scene is laid in a garden or grove, as in so many of the stories connected with Buddha's life or related in the Jātakas.

Graeco-Buddhist treatment of Buddha.

It is possible that this remnant of a figure grasping or throwing flowers may yet help to determine the legend which the frieze was intended to illustrate, and from which a particular scene was evidently represented in the portion here under discussion. Neither this nor any of the other fragments have as yet yielded a clue to the identification of the legend. But, in any case, it is not the iconographic purport, whatever it may yet prove to be, but the artistic treatment in composition, design, and style of painting which gives to this broken fresco panel its special value and interest. There can be here no possible doubt that the character of the subject is Buddhist, but none either that all the essential details of its presentation have been adapted from classical models just as they would be if we had before us this scene carved in a Graeco-Buddhist relievo from Gandhāra. The head of the Buddha shows a type unmistakably Western with a slight Semitic touch in the nose. The painter has as little difficulty as the Gandhāra sculptor had in combining, with the general outlines derived from the Hellenistic art of the Near East, the protuberance (*uṣṇīṣa*) of the head and the pierced, long-lobed ears, both of which regard for the old-established Buddhist convention of India imperatively demanded.[1] Just as in all the Graeco-Buddhist representations of Buddha,

[1] Cf. Grünwedel-Burgess, *Buddhist Art in India*, pp. 163 sqq., for a careful analysis of the classical and Indian elements in the representation of Buddha by the Gandhāra sculptors.

we find the former concealed by a top-knot of abundant curling hair. It is of special interest to note the rippling lock before the ear and the small moustache; they are features distinctly divergent from what Indian tradition prescribed, yet exemplified also by some, and far from the least interesting, of the Gandhāra statues of Buddha.[2]

Heads of disciples.

The omission of the *ūrṇā* between the brows is another noteworthy departure from the *lakṣaṇas* prescribed by Indian Buddhist convention; though rare, it can be paralleled in Gandhāra sculpture, too. But positive and far more striking evidence of the predominance of classical, or to put it more exactly Hellenistic, models is supplied by the large, well-opened, and straight-set eyes of teacher and disciples alike. There is nothing in them of that elongated and slanting look which the eyes, usually half-shut even in Graeco-Buddhist sculptures, invariably display as a special mark of beauty in all painted representations of sacred Buddhist figures from Khotan to Japan. The heads of the disciples, though all shaven in full accord with the Buddhist rule for monks, show the Western type if anything even more strongly. Their shape is rounder than that of the head of the Buddha, and in spite of decidedly hooked noses there is nothing to suggest that either Semitic or Indian features are intended. By the introduction of slight changes in wrinkles and in fullness and expression of face, the painter has cleverly managed to mark individual differences, due to age, etc.

Details derived from Hellenistic painting.

Those big eyes, however, with their frank European look, are common to all the heads, and any possible doubt as to the source from which the artist derived them is removed by the peculiar pose of the left hand of the last disciple in the lower row on the right. Its curving fingers appear from inside the robe and close on its edge, just as the hand in hundreds of classical statues of the Hellenistic and Roman periods is shown emerging from inside the toga. Where the predominance of classical models is so strikingly attested by details, we need not hesitate either in tracing to Western inspiration the skilful way in which the monotony of the heads in the group of disciples is diversified by intentional differences of gaze. While those on the left and nearest fix their eyes on the Master, others look straight before them or more directly towards the spectator. We shall observe an exactly corresponding artistic device also in the disposition of the 'angel' heads in the dado, and feel, therefore, all the more justified in recognizing here, too, the reflex of a practice clearly traceable in the scanty remains that we possess of Hellenistic painting in the Near East. Professor J. Strzygowski, a most competent authority, calls attention to the same intentional alternation in the direction of the eyes when discussing the portrait medallions which decorate the walls of a tomb chamber at Palmyra, dating from about A.D. 259, and traces it also among the encaustic portrait panels from the Fayyûm tombs.[3] A large proportion of these, too, may be ascribed to the early centuries of the Christian era, and thus chronological relationship bears out the conjectured origin of this feature in our Mīrān wall-paintings.

Dependence on Western art methods.

That the sculptor-decorators of Gandhāra borrowed most of their stock-in-trade as to poses, drapery, and similar plastic details straight from the classical models domiciled in the Hellenized Near East has been recognized long ago, and is illustrated by such an abundance of examples as to need no demonstration here. But as regards the pictorial art of Gandhāra there are no remains left there to bear similar testimony. It was reserved for the fresco fragments brought to light from these early Buddhist shrines, in the most distant corner of the Tārīm Basin, to furnish conclusive proof that this dependence on Western art methods and style must have been also equally close from the very first as far as painting is concerned, and to show us that it extended even to matters of mere technique. In the latter respect we could scarcely wish for more striking testimony than that furnished by the regular employment of methods of 'light and shade', wherever flesh is painted

[2] Cf. Grünwedel-Burgess, *ibid.*, pp. 166, 168 sq.

[3] Cf. J. Strzygowski, *Orient oder Rom*, p. 30.

in these frescoes. The use of *chiaroscuro*, familiar in classical painting, was before unknown to me in Buddhist paintings of India, Central Asia, or the Far East. The wall-paintings of Mīrān invariably showed it in all exposed parts of the body.

Use of *chiaroscuro*.

We can see the usual method employed by the painter quite as clearly in the 'angels' of the dado, M. III. i–ix (Plate XL), as in the disciples' heads of the panel M. III. 003 and in numerous smaller fragments of the frieze. It consisted in applying over the pink flesh tints different shades of grey, pale or warm, for the shadows round the face, under the eyes and neck, or elsewhere. But instead of the grey we sometimes find the effect of rough shading produced also by the use of a light red, as in the Buddha's head of our panel and in the two figures of M. III. 002 (Plate XLIII), to be described presently. In order to obtain the effect of 'high lights' a very skilful method was on occasion resorted to: the result was secured by allowing the lighter tint of the flesh to show through in the proper places from under the outlines of the lips or similar features, which were painted in boldly with a stronger pink (see Plates XL, XLII). Elsewhere, as in the eyes of the disciples of Plate XLII, the fingers and nails of the hand of M. III. 0035 (Plate XLV), etc., these high lights are cleverly laid in by bold brushwork in white.[4] Here and there the white impasto is thick enough to catch a real 'high light', as in the disciples' eyes in M. III. 003 (Plate XLII) and M. III. 006 (Plate XLV).

Method for 'high light' effect.

It is a method distinctly reminiscent of the treatment peculiarly suited to encaustic painting, and its actual use in the wax painting of Hellenistic and Early Christian times is attested by surviving examples from Egypt.[5] These and other details of technique, for which reference may be made to the expert observations furnished by Mr. F. H. Andrews's artist eye and embodied in the Descriptive List below, clearly point to the conclusion that the painters of these Mīrān frescoes, simple decorators as they were, had inherited from their masters well-established methods of producing a finished effect with such economy of work as constant application demanded. The belief seems justified, too, that the craftsmanship displayed in these paintings was derived from the same Hellenistic Near East which had supplied the Graeco-Buddhist sculpture with its style and with most of its artistic skill.[6]

Panel, M. III. 002, of seated Buddha.

The adaptation of forms derived from Hellenistic art to the representation of subjects from Buddhist legend is also well illustrated by the large piece of wall-painting reproduced in Plate XLIII, M. III. 002. It was found broken into several fragments which were lying close together in front of the last-described panel, as seen in Fig. 127. This suggests that it belonged to a higher frieze than the latter. But the evidence cannot be considered as absolutely conclusive, and it is noteworthy that by its size and scale the composition would fit in well with the frieze to which M. III. 003 belonged. We see the figure of a teacher seated on a low throne, with the right hand raised in a lively gesture. The absence of a halo round the well-drawn head may be taken as an indication that, if Gautama is intended, he is shown here before the attainment of Buddhahood. A dark pink lower garment reaches from the hips to above the feet, which rest on a footstool. A buff coloured cloak is passed like a stole over the left shoulder, leaving most of the upper portion of the body bare. This arrangement is quite common in Graeco-Buddhist as well as in other Indian schools of Buddhist sculpture, particularly where Gautama is represented as seated on a throne.[7] It is probably based upon descriptions of Buddha's appearance as fixed by early Buddhist tradition in India. But here, too, as always in the corresponding representations of Graeco-Buddhist sculpture, the drapery is treated in a fashion which is unmistakably classical.

[4] Cf. the descriptions in the *List* below of M. III. 006, 008, 009–0010, 0033, 0035, 0038, 0039, with reproductions in Pl. XLIV, XLV.

[5] Cf. A. J. Reinach, *Les Portraits Gréco-Egyptiens* in *Revue Archéologique*, 4e sér., tome xxiv. pp. 47–53.

[6] Cf. M. Foucher's very illuminating observations on this subject, *L'art du Gandhâra*, i. pp. 601 sq.

[7] Cf. Grünwedel-Burgess, *Buddhist Art in India*, p. 172.

At the feet of the teacher, on the right, there appears a smaller figure with hands folded and raised in adoration. Its dress is similar in arrangement, and shows the same draping after classical models. But the princely character of this worshipper is distinctly indicated by a curious white conical hat or turban, adorned with red rings above and two lunette-shaped dark red flaps below. We shall meet with this peculiar head-dress again in the paintings of the rotunda M. v, where it certainly marks royal personages. Neither in the sculptures of Gandhāra nor in the painted or plastic remains of later Buddhist shrines of Eastern Turkestān have I been able to trace it, and its origin remains at present quite uncertain. Could it possibly be a reminiscence of princely insignia used for a time in one of the more westerly territories, such as Bactria or Sogdiana, through which this Central-Asian adaptation of Graeco-Buddhist art must have passed into the Tārīm Basin? However this may be, we can have no doubt as to the origin of the iconographic convention which made the painter represent this adoring figure disproportionately small, in spite of its princely rank. It is the same convention which causes the Gandhāra sculptors very frequently to give greater stature to Gautama where, in his Bodhisattva state or as Buddha, he appears among minor personages in the same sacred scene. It was equally familiar to late Hellenistic art when representing emperors or the central figure of Christian story.[8] Of another attendant figure on the left, also of smaller size, the fragment only preserves parts of the left arm and knee. The representation of two tanks, or possibly railed terraces, in the foreground conveys the impression that a scene in a palace or royal garden was intended.

Figure of royal worshipper.

The examination of the larger fresco pieces has allowed us to discuss in some detail the chief features characteristic of the painted frieze. Hence, for the smaller fragments, brief notes on points of special interest will suffice. The most curious among these fragments is, perhaps, M. III. 0019 (Plate XLIV), which shows the heads and busts of two small female figures evidently in a pose of worship. Their faces are painted in careful *chiaroscuro*, and bear the same individualized and animated expression which we shall presently have to note as making the 'angel' heads of the dado so attractive. The large almond-shaped eyes vaguely recall a Persian type of beauty such as the head of the princess in the fine Dandān-oilik panel D. x. 4 unmistakably displays.[9] The fact that the hair is dressed practically in the same way on these heads as on those of the princess and her attendants in the painted panel, with long tresses hanging behind the ears and wavy ringlets in front, suggests that we have here a fashion not of local and contemporary character, but introduced from outside and maintained by artistic tradition. The same arrangement of the hair, with very slight modifications, appears also on the girls' heads which decorate the dado of M. v (Figs. 138–140, 143).

Heads of female figures.

Another interesting fragment, M. III. 009–10 (Plate XLV), presents us with the bust of a figure, probably female, dressed in elaborate garments of a curious quatrocento look, and wearing flowers on the breast. The head has suffered badly; but in other fragments, M. III. 0033–34 (Plate XLV), we have replicas of it which enable us to realize better the peculiarity of its type. As all of them approach life size, we must conclude that the figures to which these fragments belonged formed part of a higher frieze which is likely to have extended into the vaulted portion of the walls. The fragmentary male head, M. III. 008 (Plate XLV), represents quite a different type and deserves mention on account of its rapid but very effective painting, which clearly reveals its methods as described in the list. The presence of life-size figures in what must necessarily have been upper parts of the wall decoration is proved by other fragments also, such as M. III. 0035 (Plate XLV), which shows a remarkably well-painted hand; M. III. 0039–40, 0052, 0063. The pieces M. III.

Minor fragments of upper friezes.

[8] Cf. Foucher, *L'art du Gandhâra*, i. p. 603; Grünwedel-Burgess, *Buddhist Art in India*, p. 138.

[9] See *Ancient Khotan*, i. pp. 259 sq., 300; ii. Pl. LXIII.

0055, 0062 prove that animals, too, figured in the legend depicted, but the remnants are too small to permit of certain identification. The architectural background seen in M. III. 0058 is of special interest on account of the details we meet with in it, such as a bell-shaped capital and pillar and a panelled pilaster decorated with rosettes and scale imbrications. They usefully supplement the information which the scanty remains actually brought to light at the Mīrān temples give us of the locally prevailing style of architectural ornament, and help to demonstrate still more clearly its dependence on Graeco-Buddhist and purely Hellenistic models.[10]

Section IV.—THE DADO OF 'ANGELS' IN CELLA M. III

Winged figures of dado.

The preceding analysis of the fragments which have survived of the frescoed friezes of M. III will, I hope, make it easier for us to appreciate fully the artistic interest presented by the fine winged figures of the dado and to interpret correctly their iconographic significance. The fascination which, at their first appearance, they exercised for my archaeologist's eyes has in no way diminished since I could view them in safety and under less trying conditions. I have explained above how these figures of 'angels' were disposed in the painted dado of the rotunda walls, groups of six occupying each of the four segments or arcs into which the wall was divided by the entrance and windows.[1]

Preservation of fresco panels.

In the north-eastern and south-eastern segments the lunettes containing these figures were all extant, at least in parts. But in those immediately adjoining the east window, vi and vii, as well as in the lunettes x–xii, the heads had been either completely destroyed by falling masonry or so badly effaced that only portions of the wings and shoulders remained to indicate their position. The same was the case with the lunettes xxiii and xxiv on that portion of the north-west segment which had retained some of its plaster surface. It was due to this that I was not able to rescue more than seven of the dado figures. Of these, i–v form a continuous series, ii being shown in colour in Plate XL and the rest in Plate XLI. Of the two lunette panels from the south-east, viii is reproduced in colour (Plate XL) and ix in monotone (Plate XLI). The seven panels recovered withstood the risks of their long and difficult journey remarkably well. Practically all the damage visible in the reproductions was suffered by these dado panels while still occupying their positions on the wall. The colour plate IV of *Desert Cathay* shows two of the panels, viii and ix, in the condition in which they had reached the British Museum and before the friable clay and straw backing had been replaced by plaster of Paris. A comparison of the earlier reproduction of panel viii with the one now presented in Plate XL will illustrate the care with which the re-backing of the painted surface was effected, and will show how well the cracks it had suffered, partly when still on the wall, have closed up in the process.

Homogeneous effect of cycle.

If we examine the cycle of angel-like figures presented by Plates XL and XLI as a whole, two general features must strike us at the outset as determining the artistic result. On the one hand, we realize clearly that, in keeping with the decorative purpose of the dado, the aim in all externals, such as the type of head, the wings, and the simple but graceful dress, is manifestly a homogeneous effect befitting a heavenly fraternity. On the other, it is equally obvious that the painter wished to introduce a pleasing variety into his cycle, and secured it by making a distinct individual element prevail in the faces. It will be convenient to review first those details in which the aim at concordant

[10] With the scale imbrications may be compared those shown by Strzygowski, *Amida*, Fig. 78, Pl. IX, from the ancient façade of the Great Mosque of Diarbekr; Figs. 81, 84, from Early Christian churches of Bawit and Sakara in Egypt (probably early fifth century A.D.); for the large overlapping rosettes, also represented in M. III. 007, cf. *ibid.*, Fig. 77.

[1] See Pl. 32, and above, p. 497.

treatment finds expression. In each panel we see the head and shoulders of a youthful winged figure, unquestionably male, rising within a lunette of pale greenish blue. From what the panels iv, v, viii have retained of the original colouring, it appears very probable that the representation of a pale blue sky was intended. The plain black band which unites the lunettes at the top and separates the 'angels' of the dado from the frieze above has already been noted. The lower curved edge of the lunettes is bordered by a black line, with a broader yellowish band and a red line outside. These two last have, in most cases, become much effaced. The background below is a pale pinkish buff, and across this ran the dark wave lines previously mentioned, of which there remains a trace visible at the bottom corners of panel ix.

Features of angels' heads.

The figures are all leaning to the right or left, with the heads turned three-quarters in the opposite direction and the shoulders slightly oblique, as seen with particular clearness in ii, v, viii, and ix. The heads are all of the same general type, which is decidedly Western, but with a Semitic tinge. The skulls are somewhat narrow and high, with a domed top. The faces are invariably young, and display well-rounded cheeks and chins. The eyes, large and full, are set straight in the faces and wide open. Their expression is uniformly animated, while slight changes in the direction of the gaze are skilfully used to increase the air of vivacity. There is even closer uniformity in the noses, which are long and markedly hooked towards the end. The ears are slightly elongated and pierced, and the mouths small and upturned at the corners. A small crescent is marked in red on the upper lip. Necks and shoulders are plump, folds in the neck helping to bring out this plumpness and at the same time also to suggest the turning of the head to the side. The eyebrows are always strong and well arched, almost meeting over the nose in i and ii, and doing so completely in iv. The heads are shaved in the forepart, except for a patch of hair on the crown, curiously dressed in a form which resembles a double leaf with a wisp-like stalk projecting, sometimes to the right or left and sometimes in the middle of the forehead. In ii, iii, and viii a long wavy ringlet hangs before the ear.

Wings and garments of angels.

The wings, which form so striking a feature in these figures, are short and of a type showing its classical origin quite as clearly as that of the wings carried by the angels of Early Christian art. Spreading strongly outwards and upwards from the shoulders, they are admirably designed to give that impression of upward movement which, as we shall see, befits the position occupied by these figures in the general decorative scheme. The wings are formed of three rays of feathers, seen with particular clearness in ii: the inner, very short, represented by a simple line drawn parallel to the edge of the wing; the second composed of a row of petal-shaped forms; the third of quill feathers, long, tapering, and separating at their upturned tips in a fashion which suggests fluttering movement. Their long feathers are usually, but not always, coloured in two tints of red and buff, which i, v, and viii show with special clearness, one along the upper edge of the feather, the other below. The tips of the outstretched wings are almost on a level with the tops of the 'angels'' heads. The robes worn by the figures vary in colour (white, buff, and different shades of red and pink), but are alike in type. They are cut low on the neck from points about mid-shoulder on either side, falling on the breast mostly in a full curve. The garments are generally represented by plain bands of colour, with no sign of folds; but in iii and ix folds are indicated. Except in viii the edge is outlined on the flesh by a red or black line.

Method of painting.

From notes kindly furnished by Mr. F. H. Andrews, upon which I have also drawn for most of the above descriptive remarks, I add the following competent observations as regards the method which seems to have been pursued in painting. The figure was first outlined in light red, traces of which remain under the final outlines in the wings of ii, iii, etc. Next, after the flesh had been washed in with a light pinkish buff, the colouring of the cheeks was applied in a very delicate pink,

now almost effaced, and washes of pale grey added for the shading of one side of the nose and neck, the hollow of the eye, and the under-lip. The outlines of the face and features were then freely drawn in with the brush in a reddish brown of varying tints. This red-brown was used also for the line dividing the lips, which is curved in most of the figures, but straight in viii and ix. The lips themselves were painted in subsequently in bright red, 'high lights' being cleverly left in the underlying buff or boldly applied in white. Finally, black was used to paint in the hair as well as the outlines of the wings, shoulders, and robes; also to emphasize, over the brown contour lines, the eyebrows, the eyelashes, the nostrils, the corners of mouth, the hollow and base of the chin. Black served further to define the pupil of the eye and the outline of the iris. The iris itself was painted in the nut-brown of the flesh outlines and made vertically elliptical, instead of circular, to express the foreshortening of the iris as turned aside. For the eyeballs white was added thickly, sometimes in regular impasto, over grey. The painting throughout is rapid and bold, but Mr. Andrews rightly calls attention to distinctions in individual figures, such as the spirited work in i, ii, and ix, and the firmness and precision shown by viii, while signs of haste and carelessness are apparent in v.

Difference in pose and expression.

But by the side of distinctions of this kind, resulting from quasi-unconscious change in the personal factor, it is easy to note far more marked differences in the pose and expression of the figures, which manifestly proceed from a desire to produce a pleasing variety. And in that desire itself, I think, we may well recognize an inheritance from Hellenistic art with its well-defined and constant tendency towards realistic individual treatment. The aim just mentioned finds its striking expression in the care which the artist has taken to make his figures turn their heads in varying directions. As we let the panels of angels pass before us from left to right, in accordance with the order in which they were meant to present themselves to a visitor of the shrine performing the *pradakṣiṇā*, we find that the heads are generally turned alternately to the right and the left. As the general direction of the eyes corresponds to that of the head, and there is present also an upward inclination of the gaze, more or less pronounced, the impression is cleverly created, for a beholder passing at the distance marked by the width of the circular passage, that each individual figure in the successive groups of angels is seeking to attract his attention. Thus the figures i–ii, iii–iv in the north-eastern arc, and viii–ix in the south-eastern, form pairs in which the gazes directed to the right and the left seem to be fixed on the person who stands in the middle before them. We may suppose that the same arrangement was observed for the heads in the panels vi and vii, no longer extant, which flanked the east window.

Similar devices in Fayyûm portraits, etc.

The artistic device here aimed at is of particular interest because we find it illustrated by exactly corresponding examples among the scanty remains of Hellenistic pictorial art which have survived in the Near East from approximately the same period. Thus, in the wall-paintings of the Palmyrene catacombs, dating from about A.D. 259, which Professor J. Strzygowski has discussed in a masterly fashion, the heads of the medallion portraits decorating each wall are all represented as turning towards the beholder, who is supposed to face it from the middle.[2] A similar variation in the movement of the heads, he observes, is typical of the encaustic portrait panels recovered from the tombs of the Fayyûm; there, too, the eyes are shown as fixed in a steady gaze upon the beholder.

[2] Cf. J. Strzygowski, *Orient oder Rom*, p. 30: 'Im Gegensatz zu den vielen palmyrenischen Porträtreliefs, die den Kopf in strenger Vorderansicht zeigen, ist hier ein Wechsel in der Art eingetreten, dass sich die Köpfe alle dem in der Mitte jeder Wand stehend gedachten Beschauer zuwenden. Dadurch entsteht ein Wechsel in der Bewegung, ähnlich dem der enkaustischen Porträts aus dem Fayum, auf denen sich die Männer zumeist nach rechts, die Frauen nach links wenden, und den Blick, wie hier in Palmyra, forschend auf den Beschauer richten.'

In our Mīrān figures we find an additional element of variation introduced in a clever way. In almost all of them the steady gaze of the eyes to the right or left is counterbalanced by giving the lines of the figure a general inclination in the opposite direction. The impression of rapid movement thus created helps to add a distinctly vivacious character to the whole, which is noticeable in panels ii, v, viii, ix. But that the painter of this cycle of 'angels' possessed adequate artistic skill to give individuality to his figures, apart from the help which their varied arrangement provided, becomes abundantly clear if we examine the faces more closely. Thus, looking at Plate XL and comparing the two figures there presented, we cannot help being struck, in the head of ii, by the animated expression of the eyes and of the smiling mouth which is secured through the skilful application of high lights. Turning to the figure viii, we find there the same delicately rounded contours of the face, the large wide-opened eyes with their eager gaze, the hooked nose, etc. Yet a glance suffices to distinguish the peculiar firmness of the mouth marked by the straight line which divides the curving lips, and the more serious look which the moderately arched and well-separated eyebrows give to the face. The latter effect is strengthened by the length of the rippling black lock which descends in front of the right ear and reduces the fullness of the face. Turning to the figures of the panels reproduced in Plate XLI, we note similar individualistic treatment of the faces. Thus in i the carefully painted eyes bear a curious dreamy expression ; in iii the long nose gives a distinctly Semitic appearance to the full and rather mature face. The boldly painted head of iv, with its small nose and mouth, conveys a far more youthful impression. In v the abstracted expression of the eyes is heightened by the flat contour given to the adjoining portion of the face. To ix a particular air of animation is imparted by the ingenuous frankness of the eyes and the strong inclination of the shoulders and the neck, as if in lively movement.

Individualistic treatment of faces.

It is impossible to mistake in these 'angel' figures of the dado a distinct aim at boldness of outline and general effect, particularly well suited to the subdued light in which they were placed. Just because the figures themselves, as we shall presently see, were inherited with so much else from a distant centre of Orientalized Hellenistic art, we ought to give due credit to the decorators of the Mīrān temple walls for the artistic feeling and skill with which they managed to adapt their much-practised designs to peculiar structural conditions. We have clear evidence of this in the fact that the whole pose of the winged busts in the dado is devised for the position they occupy on the wall of a narrow circular passage and only about three feet from the floor. Their heads, whatever the direction, to the right or left or straight in front, are just sufficiently uplifted for the gaze to catch the eyes of the worshipper as he passes in the circumambulation of the Stūpa. It is with the same purpose that the figures are given the air of rising towards him. We find this expressed by the inclination of the shoulders and the graceful upward curve of the wings, which, with their long feathers separated at the ends, distinctly suggest fluttering movement.

Poses adapted to position.

There still remain two questions of interest which claim our consideration : What is the iconographic origin and meaning of the 'angels' which here figure so strangely on the walls of a Buddhist shrine, and whence came the decorative scheme in which this painted dado exhibits them ? The second question can be more readily examined in the light of other pictorial remains, and its solution may help to guide us towards a correct answer to the first. If we compare our dado with that which I found decorating the circular passage in the neighbouring rotunda M. v, it seems to me scarcely possible to doubt that its succession of lunettes occupied by busts reproduces, in a simplified form, the scheme presented in M. v by a continuous festoon which is carried on the shoulders of *putti* and in its descending semicircular loops contains busts of men and women, as seen in Figs. 134–40. This design of garland-carrying *amorini* is used in Gandhāra sculpture with extreme frequency for the decoration of relievo friezes on the bases of Stūpas and elsewhere,

Origin of decorative scheme.

'Angels' derived from winged Cupids.

The evidence of the Gandhāra relievos just discussed seems sufficient to warrant the conclusion that these winged figures of the Mīrān dado must be traced back to the classical god of love as their original iconographic prototype. But there are indications, too, warning us that this descent may well have been affected at intermediate stages by the influence of Oriental conceptions. In the figures before us, with their youthful but not childlike looks, their low-cut plain garments and quasi-sexless features, there is something vaguely suggestive of representations of angels such as we might have expected to meet with rather in some Early Christian church of the East than in a Buddhist shrine. I am unable to secure either time or materials for the researches which would be needed to test and eventually to explain this impression. There may be reasons, chronological or other, to put aside altogether the possibility of influence exercised by early Christian iconography. But it should be remembered that the idea of angels as winged celestial messengers was familiar to more than one religious system of Western Asia long before Christianity developed its iconography, and that the Zoroastrian doctrine of Fravashis had specially prepared the ground for it in those wide regions of ancient Īrān through which both the influence of classical art and Buddhist cult must have passed before reaching the Tārīm Basin. No graphic representations of angels appear to have survived in the Hellenistic East from a sufficiently early period to help us in clearing up the question where and when the Cupids of classical mythology underwent transformation into that type of winged figures of which the painter of the dado in M. III seems to have made use for the decoration of a Buddhist shrine.[7] The unmistakable presence of Semitic traits in most of these faces makes our thoughts turn instinctively to regions like Mesopotamia and Western Īrān as likely ground for such an adaptation.

Figures unconnected with Buddhism.

However this may be, it is certain that the appearance of such strange figures, unconnected with Buddhism, in the fresco decoration of a Buddhist place of worship need cause us no surprise. The carved friezes of Gandhāra Stūpa bases previously referred to, and an abundance of other relievos, show us how familiar a procedure it was for Graeco-Buddhist art on Indian soil to use, for the decoration of Buddhist shrines, figures and whole scenes entirely unconnected with the cult or sacred tradition of Buddhism. That this decorative practice was inherited by the early Buddhist art of Central Asia and carried to the very confines of true China was conclusively demonstrated when, on excavating the neighbouring shrine M. v, of exactly the same type, I discovered that the interior walls of its cella, under a painted frieze with pious scenes from a well-known Buddhist legend, were decorated with a dado displaying figures of an altogether secular and frankly Western character. Finally, it should be remembered that if ever a Central-Asian Herodotus had visited this temple of Mīrān, and had cared to inquire from the priest holding charge about the significance of the winged beings so strangely reminiscent of figures he might have seen before in regions where Buddhism had never effected a footing, the local guardian would scarcely have been at a loss for a name and might well have called them Gandharvas. Though in reality not needed, it would have been an acceptable label; for there is abundant evidence to show that this class of celestial attendants was as popular in the Buddhism of Central Asia and the Far East as their representation was varied.

[7] I am aware that the angel figures which meet us in Byzantine art are based upon the type of the classical Nikē; cf. Diehl, *Manuel de l'art byzantin*, p. 8; Strzygowski, *Orient oder Rom*, p. 26. Yet the early instances where angels are presented as youths of distinctly male type, and still more the representation of Cherubim, point to another source of inspiration, the winged Eros. I am unable to follow up the question further here.

Section V.—EXCAVATION OF THE TEMPLE M. v

Character of ruin determined.

While the work of packing the fresco panels recovered from the shrine M. III was still in progress, a closer inspection of the other ruined mounds close by had revealed a small piece of coloured stucco just to be seen amongst the débris which covered the south face of the square ruin, situated some sixty yards to the north-west (see Fig. 111) and marked M. v on the site plan (Plate 29). It was a badly decayed mass of brickwork (Fig. 128), rising to a height of about fifteen feet above the level of the ground, which here showed but slight marks of erosion. The approximately square shape of the ruin and the flatness of its top had from the first suggested that it could not, like some other neighbouring mounds, be the remains of a solid Stūpa. Excavation was started on February 4, and it had not proceeded far before I realized to my great satisfaction that the ruin was that of a temple, in plan exactly corresponding to the one last cleared and containing a Stūpa built within a circular cella.

Structural figures.

As seen from the plan in Plate 32, the walls enclosing the cella formed on the outside a square of over 40 feet. The sides were approximately orientated, with a westward deflexion of about 10 degrees from the true north. The walls were carefully built with sun-dried bricks measuring 16 by 9 inches and about 5 inches thick. They were nowhere less than 7 feet in thickness, this solid construction being, no doubt, due to the necessity of meeting the heavy thrust of the dome which once rose above the rotunda. Outside the cella walls there soon came to light the remains of a square passage which, judging from what survived of the floor on the south (Fig. 128), the least injured side, appears to have been about five feet wide. This floor rested on solid masonry rising about $4\frac{1}{2}$ feet from the original level of the ground. Of the wall once enclosing this passage no trace had anywhere survived, and even the floor had almost completely disappeared on the north and west faces. Only on the south had the inner wall of the passage retained enough of its plastered surface to display a small portion of the tempera paintings once decorating it. As seen in Fig. 133, it showed below, in a dado about 1 foot 8 inches high, the boldly painted bust of a winged figure closely resembling the 'angels' of M. III, and above, in a somewhat narrower frieze, the gladiator-like figure of a man defending himself against a monster of unmistakably classical composition. We shall have to examine the details further on. Here it will suffice to mention that the affinity of the painting in style and design to the frescoes of M. III was so great as to make me certain from the first that this temple dated back to the same early period.

Walls and interior of cella.

It was on the south side, too, that the wall enclosing the cella showed less damage than elsewhere. There it still rose to a height of about 10 feet from the level of the floor of the cella, which was about half a foot higher than that of the outer square passage. In other places it was badly broken, especially on the west side, where a broad cutting, made, no doubt, in the course of treasure-seeking operations of some former period, had destroyed a segment of the cella wall right down to the floor. Even the outer passage had here completely disappeared. On the east, where, as I soon found, the original entrance had lain, the wall flanking it retained a height of only 4 to 5 feet. The north portion of the wall stood to a height of about 8 feet. The Stūpa which occupied the centre of the cella was also broken at a height of a little over 10 feet, as seen in Fig. 129 and Plate 32. The circular passage around it, 7 feet wide, was choked by heavy débris of bricks which had fallen from the higher parts of the wall and the vaulting. Its clearing took two days of hard work, though every available man was brought up from Abdal to help. But by the evening of the first day sufficient progress had been made to reveal the dimensions and

adornment of the Stūpa base, and to prove that the wall of the circular passage was decorated with a frescoed frieze and dado.

The Stūpa (Fig. 129) was built with sun-dried bricks, of the same size as those composing the walls, and covered with a thick layer of hard white plaster. Its circular base, of which the elevation is shown in Plate 32, measured $12\frac{1}{2}$ feet in diameter on the level of the floor. Up to a height of close on 7 feet it had an elaborate series of well-designed mouldings, of which the two most prominent, together with the straight-edged plinth at the foot, may have been intended to represent the traditional three stories of a Stūpa base. The foot of the Stūpa had been dug into from the east in early times, no doubt with the hope of finding 'treasure'; for heavy débris from the vaulting blocked the approach to this cutting. The badly broken condition of the Stūpa prevents any estimate of its original height, and for the same reason we are left without any indication of the height of the dome which must have once risen above it and covered the cella. The dimensions of the Stūpa base and the circular passage around it, however, show that this dome must have had a span of $26\frac{1}{2}$ feet. It is much to be regretted that we have no means to judge of the method of vaulting likely to have been used for the dome. A comparison of it with the constructive methods employed in existing structures, of approximately the same period in Syria and other parts of Western Asia, would have offered considerable interest. From the fact that some small fragments of coloured plaster turned up in the débris quite close to the top of the Stūpa remains it may be concluded, with some probability, that the interior of the dome was also decorated with tempera paintings just like the cella walls. **Stūpa and dome of cella.**

The discovery of several fragments of fine wood-carving in the top layers of the débris filling the circular passage affords interesting evidence that the vaulting of the cella must have been high enough to allow space, not merely for the Stūpa itself, but also for a 'Tee' or superstructure, obviously in wood, carrying that succession of Chattras, or umbrellas, which always surmounted the Stūpas of Gandhāra, just as we still find it over the actual Pagodas of Burma and other Buddhist lands.[1] It is to the staff-like support of such Chattras that I should ascribe a thick and badly broken piece of timber which was found in the eastern portion of the circular passage, at a height of about five feet above the floor. Two square holes passing through the middle, and at right angles to each other, were evidently intended for wooden cross-pieces likely to have carried an umbrella, perhaps modelled in plaster. It is to the decoration of the square pedestal or crown intervening between the Stūpa dome and the 'Tee' proper, as seen in many of the small Stūpas from Gandhāra,[2] that I am inclined to assign the excellently carved fragment of a small wooden capital and shaft, probably belonging to a pilaster, M. v. 001, which is reproduced in Plate XXXIV. The type of acanthus which decorates the front and sides of the capital is plainly Hellenistic and frequently met with in Gandhāra relievos.[3] It is also represented on the painted lintel of the gate seen on the south-eastern portion of the frieze of the circular passage (Fig. 134). **Remains of wood-carvings.**

The comparison of this interesting piece with the fragments of decorative wood-carving from the L.B. site of Lou-lan, shown in the same plate, helps to demonstrate the close chronological connexion between the two groups of ruins. Both this piece and the small fragment of a similarly carved capital, M. v. 003, have remains of polychrome decoration. The carved lotus, M. v. 006 (Plate XLVII), which was found close to the top of the surviving part of the Stūpa, is also likely to have adorned some member of the superstructure. Some of the petals still retain their gilding. The iron tang which passes through the centre of the carved ornament in **Polychrome decoration.**

[1] Cf. Foucher, *L'art du Gandhâra*, i. pp. 74 sqq.; also above, p. 38.

[2] See Foucher, *ibid.*, i. Figs. 20, 70, 71; also above, p. 38, with Pl. II.

[3] See e.g. Foucher, *L'art du Gandhâra*, i. Fig. 118.

a slanting fashion probably served to fix it. At a somewhat lower level, but still several feet above the floor of the circular passage, were found the fragment of a large wooden rosette carved in relievo, M. v. 008, and two lotus-shaped discs, M. v. 009–10, with traces of painting in different colours.

East entrance to cella.

Other interesting remains came to light on clearing the entrance to the shrine which led through the eastern portion of the square passage. Of the wooden gate which must have closed the passage, about 5 feet 1 inch wide, giving access to the cella, there was found besides other panels, once painted but decayed beyond recognition, of which M. v. 0011 is a specimen, the well-carved block, M. v. 0012 (Plate XLVII), which probably had formed the left end of the lintel. It shows a large lotus-like flower in bold relievo, placed partly within a floral moulding, and it may be compared with the carvings L.B. II. 0014; VI. 001 (Plate XXXII), which are likely to have served a similar purpose. On the lintel of the painted gate seen in the previously mentioned frieze (Fig. 134) a large flower of the type of L.B. VI. 001 occupies an exactly corresponding position.

Remains of stucco images.

The low step leading up to the cella entrance was flanked on either side by platforms about six inches higher, extending along the inner wall of the passage and 2 feet 8 inches wide. Stucco images must have once occupied these platforms. But of them only pairs of wooden stumps had survived, manifestly remnants of the core or framework for the legs, and a friable stucco fragment, about 16 inches long, which must have belonged to a statue on the north platform, but the character of which could no longer be determined. Its surface showed traces of a diaper painted in bright yellow and green, and probably representing part of a brocaded dress. In this eastern portion of the passage, of which the width could no longer be exactly determined, was also found the oblong wooden block, M. v. 007. The nine holes with which it is pierced were evidently intended to hold incense sticks or small tapers, and the whole, retaining traces of decoration with stucco and paint, had no doubt served for use in worship.

Wall-paintings of square passage.

It will here be convenient to complete the description of the square passage enclosing the temple cella by an account of the remains of the tempera paintings that once decorated its inner wall. It was only a small portion of the wall facing south, as already mentioned, which retained enough of this decoration to allow its general character to be determined. Even there the total height of the still extant painted surface of the wall nowhere exceeded three and a half feet from the floor. The photograph reproduced in Fig. 133 shows the only part of the wall, about three feet long, in which the arrangement of this fresco decoration into a dado of lunettes and a narrow frieze above it was still clearly recognizable. Pressure from the broken masonry behind had caused the painted plaster surface bearing this frieze to bulge forward and overhang, even where it had not altogether destroyed it. After a few days' exposure to the violent winds almost constantly blowing at the time, the surviving portion of this frieze broke away and perished.

Fight of youth with composite monster.

I feel all the more glad that I secured a record of it in the above photograph because the subject and decorative motifs represented in this fragment are of interest in several respects. We see in it a young male figure, of strong muscular development and apparently nude, defending himself with a club carried in his right hand against a monster which is shown in the act of springing upon him. The head of the monster was unfortunately destroyed by the peeling off of the plaster. But the body, which showed the well-drawn outlines of a lion, with curling tail and wings, leaves no doubt that a monster of the classical griffin type was intended. Now we know that composite monsters of this kind were favourite subjects in the Hellenistic art of Western Asia from an early date. Sculptured representations of them directly borrowed from it abound as decorative motifs in Gandhāra relievos, though preference is there given to Tritons, Ichthyocentaurs, and other more fantastic beings.[4] The narrow neck and the scalloped crest behind it suggest that the missing head

[4] Cf. Foucher, *L'art du Gandhâra*, i. pp. 241 sqq.

was meant for that of an eagle, as in the classical griffin. But I may note that in the bronze figurine of a similar monster now in the British Museum, which Sir Hercules Read has described in a recent publication and to which he was good enough to call my attention,[5] a body closely resembling that in our frieze is combined with a head which is altogether fantastic and certainly not of a bird. This figurine is said to have been found near the Helmand River, a region where, as *inter alia* my explorations of 1915 have shown, the influence of Hellenistic art made itself strongly felt.[5a]

Decorative floral motifs.

The ground colour of the upper frieze was a bright Pompeian red, showing up well the mauve-coloured body of the griffin with its wings of dark bluish-grey and the inner ray of its feathers in terra-cotta. Besides the monster, to the left, there appeared the remains of a carefully-drawn acanthus ornament in green, near which was a hanging palmette, and below a large fruit-like object in dark reddish-brown. Remains of a similar acanthus leaf were traceable higher up to the right of the human figure. Small single rosettes and leaves were found scattered over the frieze without any apparent purpose except for filling blank spaces, in a fashion which seems to be also well known to the late Hellenistic art of the Near East.

Winged figures of outer passage dado.

Below this frieze, and separated from it by a triple band in white, black, and pale blue, altogether about eight inches wide, ran the dado already referred to, extending down to the floor. It was divided into lunettes measuring about 2 feet 9 inches along the top line. One of these, M. v. 004, seen in Fig. 133, was nearly intact, but so badly cracked that the further damage it suffered on removal was in no way surprising. Nevertheless, enough has survived of the winged figure contained in it, and of the festoon-like band forming the lunette, to permit of the reproduction in Plate XLV and of the detailed description in the list below. Of the similar figure, M. v. 004, in the lunette adjoining on the left, only portions of the wings could be recovered. The head was here too much broken to survive removal, but I noted that it was of a slightly different type and had its hair dressed in the peculiar double-leafed tuft previously observed on the heads of the 'angels' in M. III dado. I have already had occasion to refer to the broad festoon-like black band, about seven inches wide and effectively decorated with a bold cloud scroll in red and white, which formed the lunettes.[6] It showed clearly how this decorative scheme was derived from the festoon design so frequent in the relievo friezes of Gandhāra sculpture. The background beneath the festoon was yellow, and decorated with wave lines in red and black. As fragments of the same background were found still *in situ*, to a maximum height of six inches, in different places along the foot of the passage wall facing south and of that on the east and north sides, it could safely be concluded that the whole of the inner walls of the square enclosing passage had once been painted in a similar fashion.

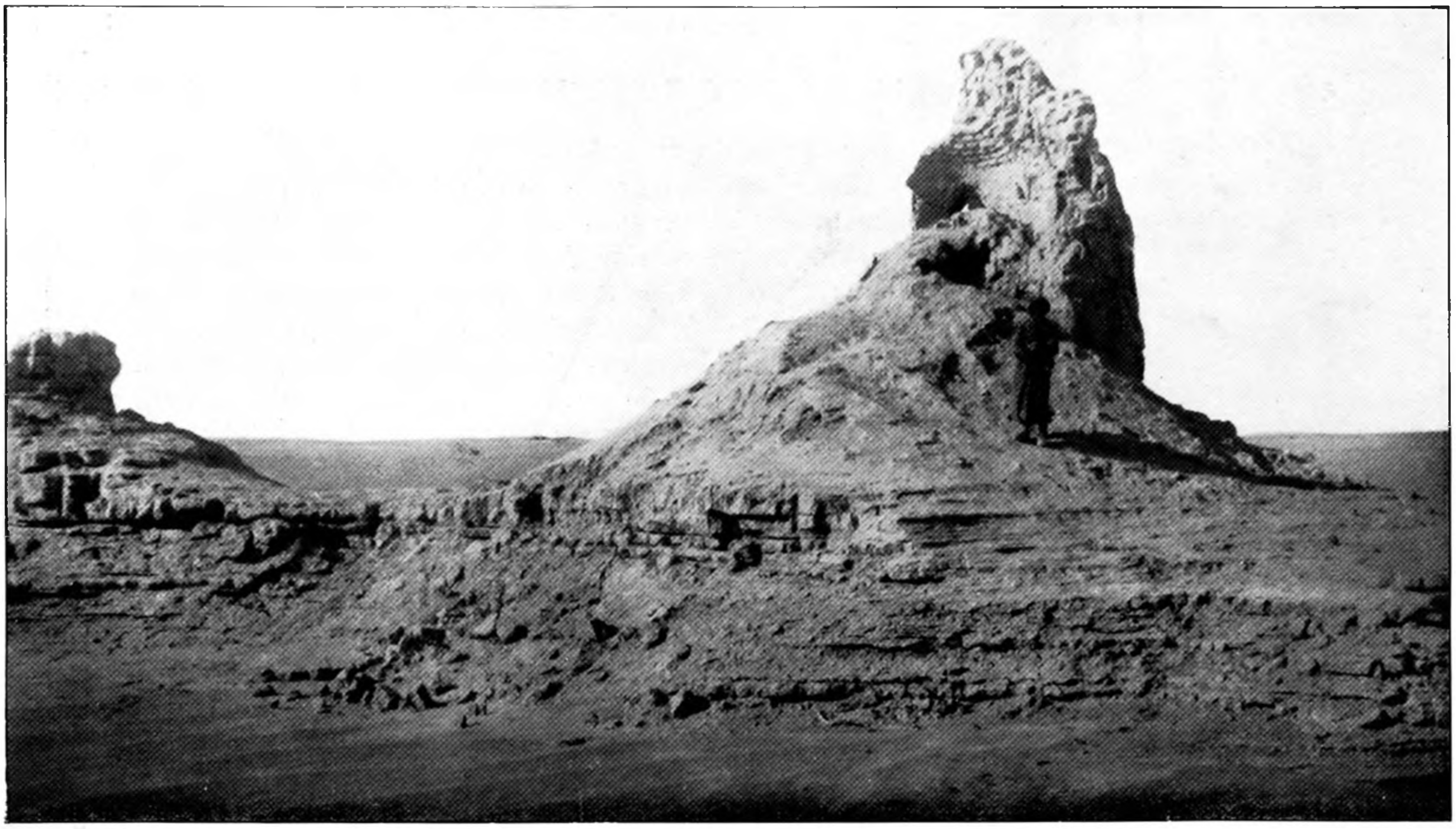
Painting of lunette and figure.

As a detailed description of the panel M. v. 004 is given in the list below, it will suffice here to call attention to the essential points in which the lunette and the winged figure represented in it differ from the dado of M. III. As regards the lunette we may note that it is distinctly flatter. Its field of bright red may suit the bolder style of painting, but it also shows that the suggestion of the sky, from which the 'angels' of M. III seem so appropriately to rise, had passed from the painter's purview. Though the winged figure rising with head and shoulders from the lunette is closely akin in type and pose to the 'angels' of M. III, yet it shows distinct inferiority in design and technique.

[5] See *Essays and Studies presented to William Ridgeway*, 1913, p. 261.

[5a] The winged lion of Hellenistic type seems to have made his way eastwards far beyond Mīrān, as appears from the description of two sculptured monsters found in Ho-nan and attributed approximately to the sixth century A.D.; cf. Petrucci, *Les documents de la Mission Chavannes*, in *Revue de l'Université de Bruxelles*, 1910, p. 507, note 1. But I am unable at present to refer to the publications reproducing those sculptures.

[6] Cf. above, p. 510.



132. RUIN OF DOMED STRUCTURE M. X, MĪRĀN SITE, SEEN FROM SOUTH, AFTER CLEARING.

133. PORTION OF PAINTED DADO ON INNER WALL OF SOUTH PASSAGE OF SHRINE M. V, MĪRĀN SITE.

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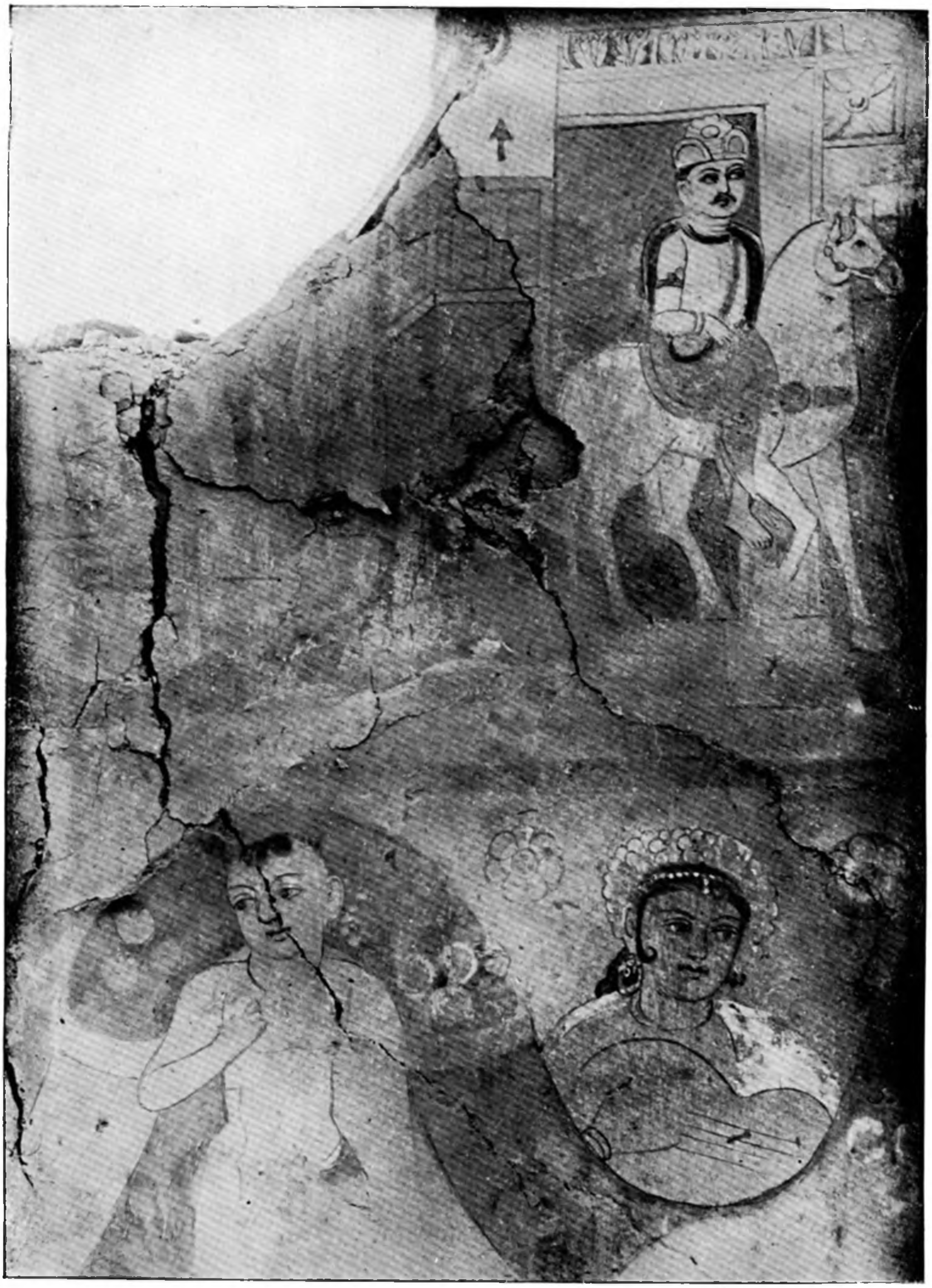
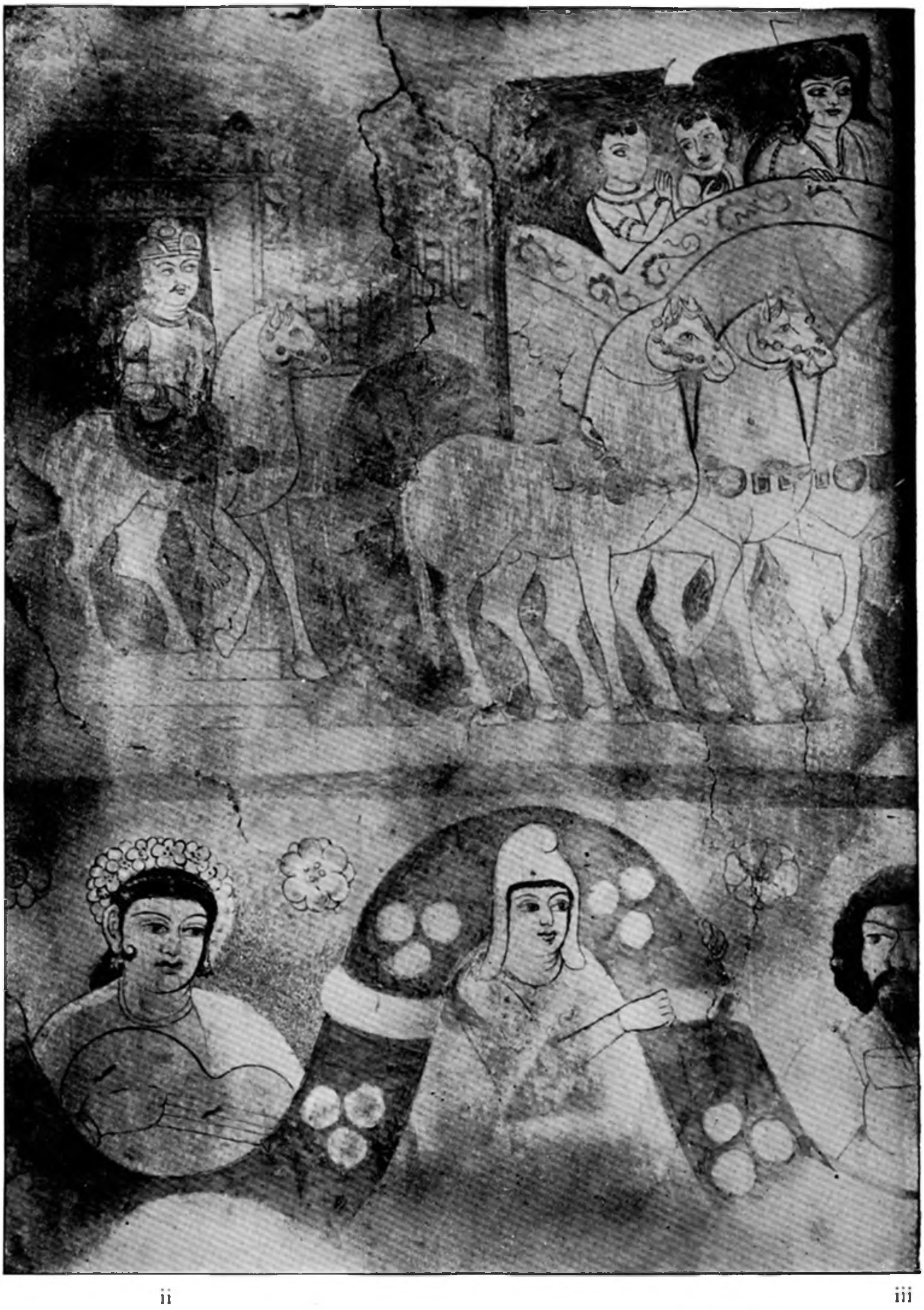


ii

134. PORTION OF PAINTED FRIEZE AND DADO ON SOUTH-EAST WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRĀN SITE.



ii iii

135. PORTION OF PAINTED FRIEZE AND DADO ON SOUTH-EAST WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRĀN SITE.

frieze, besides traces of a third above it. In the second place, considering the influence of the *pradakṣiṇā* custom as explained above, it seems highly probable that the composition of the wall-paintings as a whole had its starting-point on the left of the entrance to the cella and thus in the south-eastern segment. As is shown by the photographs of the extant wall-paintings in the southern arc (reproduced in Figs. 134–40), the foot of the wall was adorned with a dado which contained a cycle of festoon-carrying figures and of others appearing in the lunettes between them. The height of this dado from the floor to the lower edge of the triple border which separated it from the upper frieze was 2 feet 6 inches. Then followed a border composed of three bands in black, slaty green, and cream, each about one and a half inches wide. This border, but with the succession of its bands reversed, was repeated along the top of the frieze which surmounted the dado. The frieze was almost intact over a segment about fourteen feet long. On its field of bright Pompeian red, close on three feet wide, there extended a continuous succession of scenes presenting a picture more striking than any I had yet set my eyes upon in the course of my explorations. With most of the figures shown in movement from left to right, it seemed at first sight to suggest something like a triumphal procession.

Remains of top frieze.

Where, over a small portion of the segment to the south-east, the cella wall still rose to a height of nearly ten feet, there could be distinguished above the upper frieze parts of the legs and feet of at least three richly-dressed male figures, evidently life size, standing in a row. The painted frieze to which they belonged seemed to have extended into that section of the wall where the vaulting began. But the frescoed remains were too scanty to permit of any surmise as to the general decorative scheme followed, and for the same reason they need not detain us here long. The drawing in the remains of these figures seemed very stiff and poor by contrast with the frieze and dado below. All appeared to have been represented with long coats reaching to the knee and painted in rich yellows and greens. Underneath these were seen the ends of bulging trousers in deep purple and brown. The legs were encased in what looked like stockings, but they may have been meant for big boots or mocassins. On one figure, they were dark red above and green over the feet; on the other, black above, red below down to the ankle, and yellow over the feet. But the peculiar feature of this leg- and foot-gear was its rich ornamentation of arabesques in crimson, dark green, and yellow; among them fantastic scroll-work was abundant, recalling the wave lines of Chinese embroidery. Considering the scanty remains of this topmost fresco band, there is less reason to regret that, owing to their position, I could not secure any satisfactory photograph of them. The plaster surface which bore them was far too brittle for removal, and on my return in 1914 was found to have broken away completely. It may be mentioned here in passing that among the small detached fragments of wall-painting brought away from the débris of the circular passage there are two, M. v. 0014 (Plate XLV), 0017, which from their scale may be supposed to have belonged to that topmost band.

Painted frieze above dado.

Fortunately a kindlier fate had watched over the fresco frieze surmounting the dado, for which special importance must be claimed on account of both the subject and its treatment. I proceed to describe it from the photographs reproduced in Figs. 134–40 and the detailed notes recorded on the spot. Starting from the extreme left marked by the south side of the entrance, I found a piece of the frieze about three feet long, broken down to less than half of its original height through the decay of the wall at its back. On this piece, of which the right end is shown by Fig. 134, it was possible to distinguish only a balustraded substructure in wood and above it a low throne, of the Indian *gadī* type, covered with drapery. Seated on this, and with the feet resting on a footstool, appeared the lower part of a figure wearing a flesh-coloured robe laid in ample folds after the classical fashion. To the left of this seated figure there remained the legs of a red-robed personage,

and to the right the bodies from the hip downwards of two smaller attendants wearing robes in green and red. Beyond these to the right there could just be distinguished, in faded outlines, the bare legs of a somewhat larger standing figure.

Representation of riding prince.

Here the intact portion of the frieze was reached, as seen in Fig. 134, where it showed a princely figure riding out of what obviously represented a palace gate. The wooden framework of the walls on either side was indicated by posts and beams painted in light brown with red outlines. On the lintel above the rider's head a line was inscribed in Kharoṣṭhī characters, black and about three-quarters of an inch long (Fig. 142), to which we shall return further on. Above the lintel there was represented a long panel decorated with acanthus leaves and palmettes, and to the right of the lintel a large carved flower. This, as already mentioned, closely resembled the piece of wood-carving, M. v. 0012 (Pl. XLVII), from the cella gate actually found in the entrance passage, as well as similar carved pieces from the Lou-lan Site L.B.[1] The horseman's features and dress were very like those of the princely personage represented further on in the frieze and also in the lunette of the dado immediately below it. The face in all three figures bore a curious Oriental expression, evidently meant to characterize an Indian, and very different from the features of the male heads appearing in the dado. Here the 'prince' was dressed in a crimson cloak descending across the left shoulder to below the waist, and closely resembling in type that of the principal figure in the fresco panel, M. III. 002 (Plate XLIII). A green garment recalling the Indian 'Dhōtī' covered the lower part of the body. A rich jewelled armlet, a broad necklace, and triple bracelets, all painted in red, were intended to mark the high rank of the rider and were also found in the other two representations of the same figure. The head-dress, practically identical in all three cases, consisted of a turban or puggaree laid in white ring-like folds with red outlines round a conical knob (left white on the rider's head, but black elsewhere), which represents the top portion of a high cap like the modern *kulla* worn by Pathāns. The end of the puggaree was turned up behind in fan-fashion, just as it is so often seen in the head-dress of princely personages and others in the Gandhāra sculptures. The only striking modification of the latter type was in the two lunette-shaped upturned flaps in red which rose above the close-fitting rim of the head-dress, just as in several of the fresco fragments from M. III in Plates XLIII, XLIV, these flaps evidently being meant to show the lining of the conical cap turned outside.

Saddle and horse-gear of mount.

His horse, remarkably well drawn, was white, and had a small head. Its bridle and head-stall were decorated with round red tufts; the saddle-cloth appearing beneath the rider's seat was brown with black borders. Passing across the horse's breast, and apparently fastened to the saddle, was a broad belt made up of three strings or straps, over which were fixed large round and square plaques, evidently of metal. It would certainly be of interest to trace the relation between this ornamental horse-gear and that seen in late classical sculpture, with which it seems to present points of contact. But neither time nor materials are within my reach. It must suffice to mention that the large round plaques or bosses are found in a corresponding position on the shoulders of Prince Siddhārtha's horse Kaṇṭhaka in the Gandhāra relievos.[2]

Princess driving quadriga.

In front of the horseman a chariot was drawn quadriga-fashion by four white horses, wearing across the breast harness of the exact type just described. Here, too, the drawing of the animals was good, the trotting movement being indicated with ease (Figs. 135, 136). On the other hand, the drawing of the chariot was curiously clumsy in perspective, the object apparently being to show both wheels and sides. The wheels were painted black with crimson spokes, the body of the chariot purple, with a broad rim in yellow edging its top and showing elaborate tracery in red and black. Above the central portion there rose the head and shoulders of a beautiful and richly-

[1] See above, pp. 405, 514.

[2] Cf. e.g. Foucher, *L'art du Gandhâra*, i. Figs. 182–84.

adorned woman, apparently holding the reins, with her left hand resting on the chariot front. Her hair descended in black tresses below the neck, with love-locks in front of the ears and two fringes crossing the forehead. The face was of a 'Houri'-like type, suggesting development from some Hellenistic model under Iranian influence. Her turban-like head-dress was nearly the same as that worn by the second female figure in the dado below, and can be described there in detail, being represented on a larger scale. Two strings of red beads crossing the hair obliquely were fastened with a large circular jewel ornament above the middle of the forehead. Her dress consisted of a mauve-coloured bodice, open in front, over which descended two strings of yellowish beads from the side of the neck, and of a dark green mantle or stole laid in heavy folds across the left shoulder. Standing behind the fair charioteer appeared the figures of two children, rather poorly drawn, with heads disproportionately large. The peculiar lock on the forehead resembling a double leaf with stem, already familiar from the 'angels' of the dado in M. III, made them recognizable as boys. The one to the right was dressed in a yellow vest, the other in one of light blue, the edges being in each case trimmed with red. On the arm of the boy to the left were jewelled bands and a bracelet.

White elephant in sylvan scene.

In front of the chariot was painted a tree, evidently intended to mark a sylvan setting for the scene, like the foliage and tree appearing in the background further on. Both trees were drawn in a manner closely resembling that which is displayed by the fresco panel M. III. 003 and has been discussed above. Over a cone of dark green, almost approaching black, intended to represent the shady mass of the foliage as a whole, were painted leaves and flowers in yellow, intermingling with some leaves in a pale green. The branches bearing them were shown in very dark crimson and the tree trunks in brown, with knobs indicating lopped branches. Between the two trees, and against a dark background in which foliage, as seen in Figs. 136, 137, could still be made out, a richly-caparisoned white male elephant was marching. It was drawn with remarkable truth to life, and looked the principal, and also the best modelled, figure in the extant portion of the frieze. The expression of the animal's eye and face and the movement of its legs were caught with much skill and obviously from personal observation. Large circular bosses, painted yellow with red outlines and probably intended to represent gold ornaments, decorated the forehead and trunk, and were held in position by means of narrow black bands. Three strings of big rings, yellow with red rims, were seen hanging over the elephant's right ear. A diadem of yellow leaves, outlined in red and evidently representing gold, encircled its forehead. Equally rich was the covering of its back. Over a black saddle-cloth, perhaps of felt and edged with fringes alternately red and black, was spread a carpet-like fabric, yellow in colour and probably meant for cloth of gold. It showed, woven or embroidered, a diaper of pink-outlined circlets, each filled with a five-petalled rosette alternately crimson and light blue. Large metal bells, painted in dark red, hung from the corners of the saddle-cloth. Close to the bell above the right hind leg was written on the white background of the quarter a short inscription (Fig. 144), in three lines of small but clear Kharoṣṭhī characters and a little over two inches long, which will be discussed further on.

Prince leading elephant.

In front of the elephant and leading him by the trunk was seen moving a personage (Fig. 137) who, by the characteristic head-dress and clothes corresponding exactly (except for some variation in colour) to those of the horseman and of the figure in the dado lunette below, and by the rich jewellery on neck, ears, arm, and wrist, could clearly be recognized as an Indian prince. The stole-like cloak thrown over the left shoulder was light green; the Dhōtī-like garment clothing the body from the hips downwards was yellow, and draped in rich folds unmistakably derived from classical models and indicated by red outlines. The broad jewelled necklace, the big flower-shaped ear-rings, the armlet with its central jewel, and the triple bracelet were all painted in yellow

meant for gold, with red lines marking the edges. While the left hand supported the elephant's trunk, the right carried a peculiarly shaped jug, painted a yellowish-brown, apparently representing metal. By its very narrow base and straight spout it closely resembled the vessel which is known in Northern India as 'Gangā-sāgar' and is in traditional use among the Hindus for sacrificial offerings of water.

Indian ascetics.

Moving forward, in a row and with uniform attitude, to meet the prince were seen four plainly-dressed figures (Fig. 138). By their bushy hair and beards, and by the long staffs which they carried in their left hands along with a small bowl for water (*kamaṇḍalu* in Skr.), they could easily be recognized as typical representations of Indian ascetics. All of them had ruddy faces as befits men living in the open jungle, with bare browned breasts. The simple garments were alike in shape, but differed in colours. The white-bearded old man on the left had his head covered with a small white puggaree. With a yellow Dhōtī below the hips he carried a green cloak laid over both shoulders in a fashion which is also adopted for the Saṅghāti elsewhere (see Plate XLIII), its ends descending below the knee. The middle-aged man next to him, with heavy black beard and moustache, was clothed in a purple cloak and yellow Dhōtī. The beardless youth following had locks descending below the ears, and the rest of the hair, on the partly-effaced crown of the head, dressed into what looked like a knob. His garments were a bright green Dhōtī and a yellow cloak. The last figure on the right, much better preserved, was again middle-aged, with bared head and curly beard and moustaches, all black. He wore a purple cloak and a green Dhōtī.

Remainder of frieze.

Beyond this last figure, in the background, a tree was visible, with foliage made up of broad green leaves and small curves of white flowers edging it. In the foreground the portion of another quadriga (Fig. 140) still survived, the rest being lost through the breakage of the cella wall where it adjoined the previously mentioned cutting. In outlines and colours this quadriga was the exact replica of the one in the left part of the frieze, but the right arm and breast which remained of a figure holding the reins were clearly those of a male. Further on, what was left of the broken portion of the frieze only showed traces of the wheels of two more chariots with a large draped figure between them, moving ahead and carrying in his right hand a fan-like object.

Fragments of frieze on northern arc.

In the northern arc of the circular passage, beyond the big cutting, the upper part of the cella wall had, as already stated, suffered so badly that only isolated fragments of the frieze once decorating its surface survived, and those, too, solely in the lowest parts. None of them were more than about a foot in height. The first fragment from the left containing some recognizable objects is faintly visible in the photograph, Fig. 143, above the border dividing the frieze from the dado. There a shaggy lion, with its head effaced and its tail drawn in between the hind legs, was seen seated and facing three animals of which only the legs with cloven hoofs remained. Beyond this to the right, after some remnants on which the legs of two standing figures and something like a curtained entrance might be recognized, portions of two small male figures followed, similar to those seen in Fig. 141. One of them, wearing a reddish-brown vest and a green under-garment, had a diaper of small squares, evidently meant to indicate scale armour, over the right arm and over a short skirt covering the abdomen. The right hand seemed to grasp the middle of what might be a lance.

Figures of armed men, animals, etc.

After some badly effaced animal figures, among which the legs of a trotting horse, a yellow-skinned beast with black spots and short tail, and another beast in crouching position could just be made out, there followed the small fragment seen in Fig. 141. Here, too, were to be seen two male figures, moustached, of the type and dress just referred to. Their heads, fairly well preserved, had white puggarees wound round them in a fashion curiously reminiscent of the head-dress of Darius in the famous Pompeian mosaic of the battle of Alexander. Both figures wore closely-fitting

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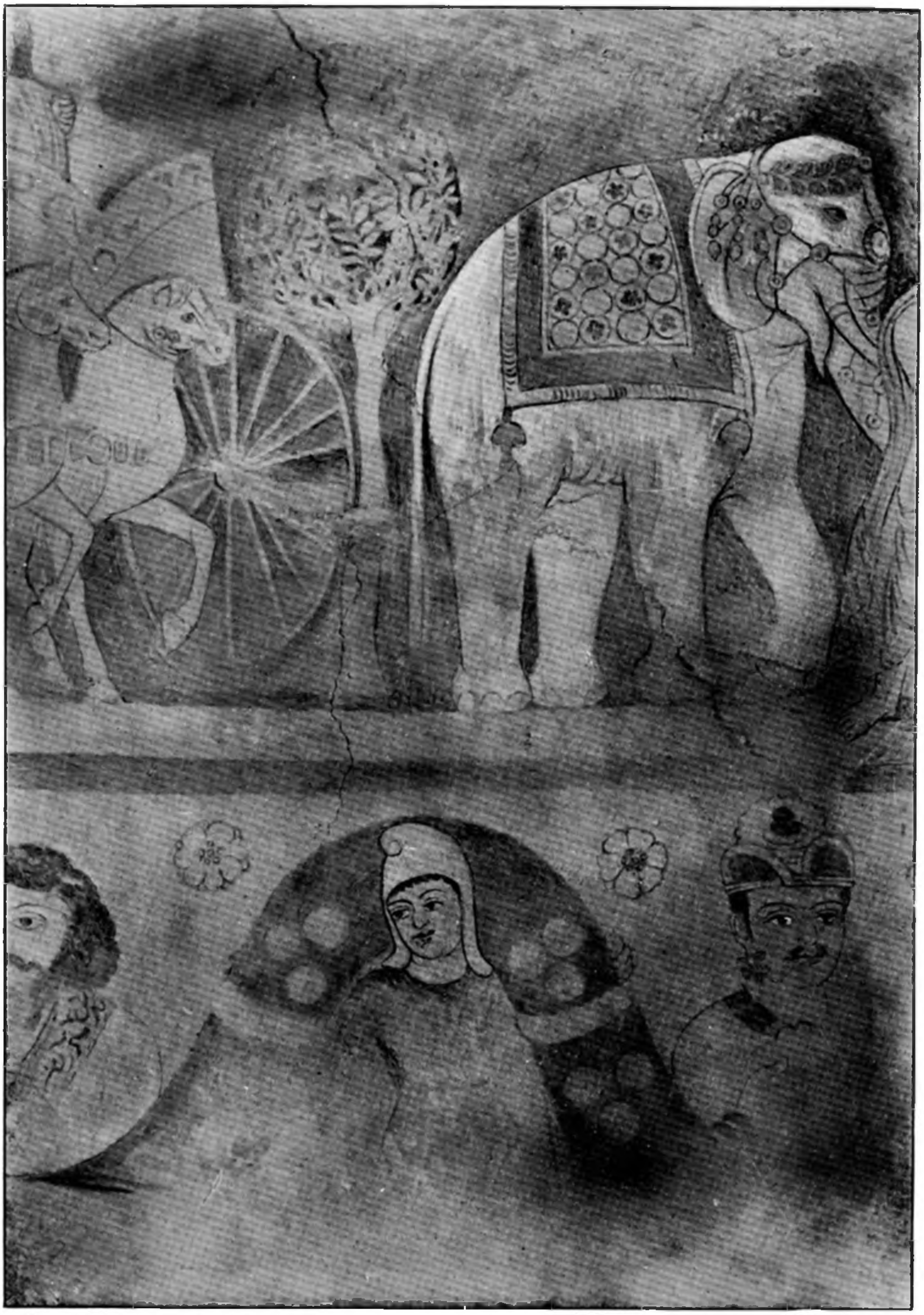
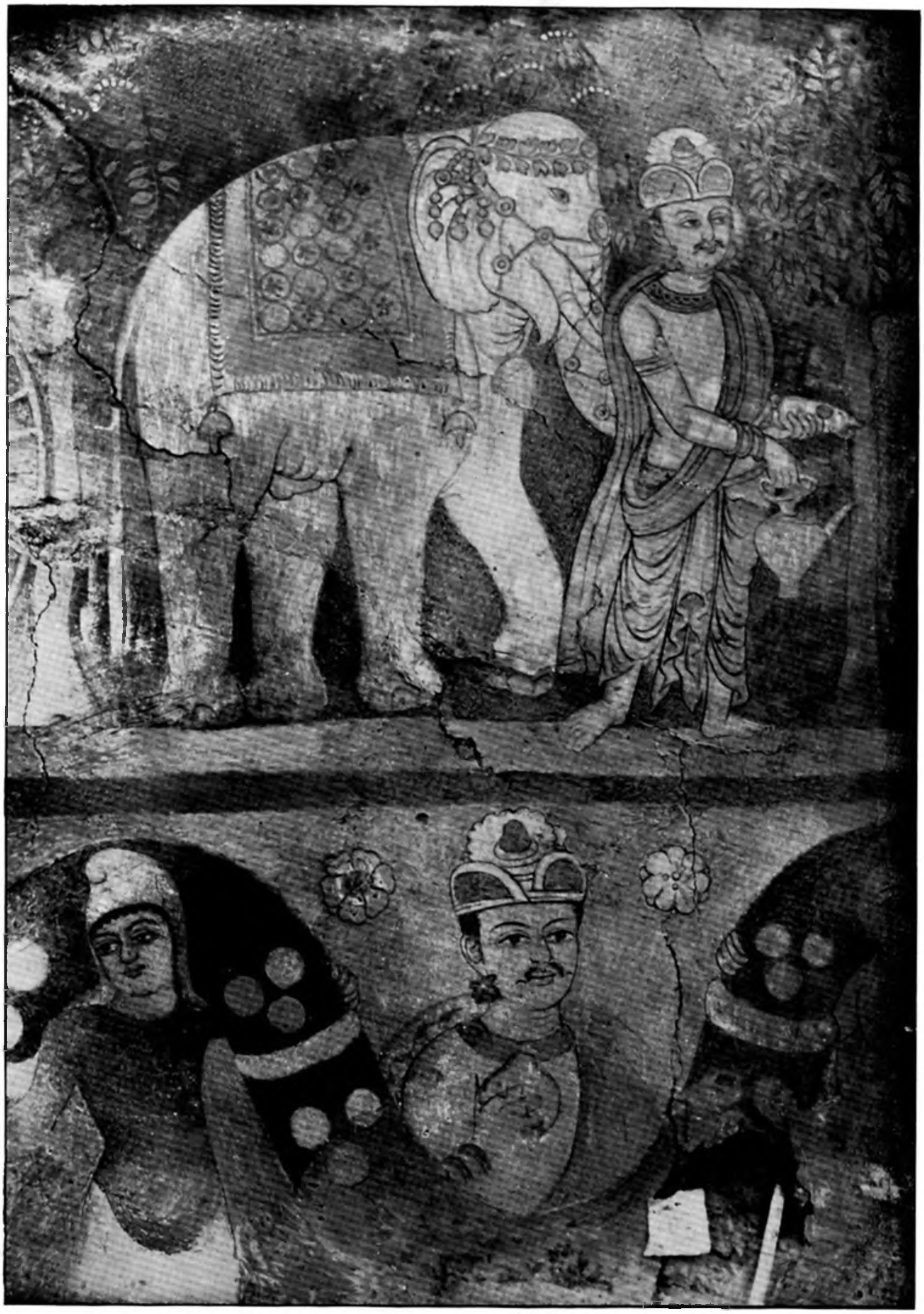


iii iv

136. PORTION OF PAINTED FRIEZE AND DADO ON SOUTH WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRĀN SITE.



iv

137. PORTION OF PAINTED FRIEZE AND DADO ON SOUTH WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRĀN SITE.

bodices, green on the left and flesh-coloured on the right, with cloaks coloured in the reverse order across the left shoulder; the scale-armour skirt over the hips and abdomen is also recognizable in the photograph. The left figure, wearing bangles on the right arm, seemed to point towards the animals, while the other raised the left hand in a gesture which apparently expressed abhorrence or pity. Above the shoulder of this figure three Kharoṣṭhī characters tentatively read by me as *ṭha mi tra* (?) were faintly traceable. On the extreme right, and quite close to the edge of the wall still retaining a wooden door-jamb, appeared a small youthful figure astride a galloping animal which seemed to have the body of a yellow, black-spotted beast, but the head and neck of a horse (Fig. 141). The rider, lightly clad as if in a vest and 'shorts', had his arms clasped round the animal's neck. By the side of his breast I could just make out two Kharoṣṭhī characters which seemed to read *eṣe*, like the first two visible on the inscribed lintel at the beginning of the frieze.

Interpretation of painted frieze.

I could not reasonably hope that these sorry remnants of the frieze on the wall of the northern hemicycle would help towards the interpretation of the scenes presented. It was different with the animated procession which unrolled itself before me on the fascinating frieze of the remaining southern arc. Strangely reminiscent of the distant Hellenistic West as were the background with its fine Pompeian red and a good deal of the details in the drawing, there could be no possible doubt that the subject of the frieze was taken from some Buddhist sacred story. Yet my knowledge of Buddhist hagiology failed me at the time for the identification of it, nor could I subsequently find leisure for a systematic search even when the needful books might have been available. So it was a special gratification to me when, in the summer of 1910, the puzzle as to the subject of the frieze was solved by my friend, M. Foucher. From my photographs and description he very soon recognized scenes from the legend of King Viśvantara (Vessantara), well known among the hundreds of *Jātakas* or 'Stories of the Buddha's former births'.

Story of *Vessantara-jātaka*.

The legend, contained in the Pāli *Jātaka* and found also in various Sanskrit versions of the cycle, must have been particularly popular; for not only is it represented among the sculptures of the old Indian school decorating the Stūpas of Sānchi and Amarāvatī, but it also is one of the few *Jātakas* of which representations have so far come to light among the relievos of the Gandhāra region. Considering that the legend was localized at one of the famous sacred sites of Gandhāra, near the present Shāhbāzgaṛhi, it is certainly curious that the illustration of it in Graeco-Buddhist sculpture is confined to three fragments from the relievo panels that once decorated the sides of the Jamālgaṛhi stairs and are now at the British Museum.[3] The story is related at great length in the early Pāli version of the *Jātaka*, and, as it is conveniently accessible in the translation and otherwise well known, the briefest summary may suffice here.[4]

Prince Vessantara's exile.

It tells how Prince Vessantara, in whom the Buddha had incarnated himself in a previous birth, being heir of a royal family and imbued with excessive devotion to charity, made a pious gift of a wonderful white elephant which could produce rain, as well as of its priceless ornaments, to certain Brahmans. At the desire of the people, who felt alarmed at the loss thus suffered by their kingdom, Vessantara was banished by the king, his father, into the forest. As he left the royal city, taking his wife Maddī (Madrī), who insisted on sharing his exile, and his two young children mounted on a chariot, he gave away loads of precious things. He had 'distributed to beggars all he had', and was moving away from the city, when he was approached by four Brahman mendicants who had come too late for the great giving of alms and now asked for the horses of his chariot. After he had

[3] See Foucher, *L'art du Gandhâra*, i. pp. 270 sq., 283 sqq. In the latter place references are also given to other sculptured representations of the legend and to its mention in texts.

[4] Cf. E. B. Cowell and W. H. D. Rouse, *The Jātaka*, vi. pp. 246–305.

given them, four gods in the guise of red deer took their places and drew the chariot onwards until Vessantara, on being asked by another Brahman, gave away the chariot also. Moving on afoot and carrying the children, the prince and his wife then retired to a hermitage in the mountains. There finally he was made by the gods to give away in pious gifts, first his children, and then even his faithful consort. After having thus tried his inexhaustible charity by the severest tests, the gods ultimately restored his wife and children to him and caused him to be installed as king by his father, who had come to seek him in the forest. Thus all ended in perfect earthly happiness after the wont of old folk-lore stories.

Scenes of frieze identified.

With the legend once identified, it is easy for us to recognize the scenes presented in the photographs of that portion of the frieze which I found extant. On its extreme left (Figs. 134, 135) we see Vessantara in princely dress riding out of the gate of the royal palace, preceded by Maddī and his two children, in 'a gorgeous carriage with a team of four Sindh horses', just as the *Jātaka* describes them.[5] That the children are shown by the painter as boys is of special interest, as the *Jātaka* story with characteristic inconsequence speaks of them in some places as a boy (Jāli) and girl (Kanhājinā), and in others again as two sons, this apparent variance of tradition being found both in the prose and in the metrical portions of the text, which are probably older.[6] We have next before us the magical white elephant and the prince in the act of leading it up for presentation (Figs. 136, 137). The intended gift is indicated quite clearly by the sacrificial vessel which he carries, and from which water will have to be poured out in accordance with the ancient Indian rite of donation distinctly mentioned by the *Jātaka* in connexion with a similar incident further on in the story.[7]

Order of incidents represented.

By a kind of anachronism, about the reason of which it would be of little profit to speculate, seeing how small a portion of the whole frieze remained, but for which it would be easy to adduce parallels from other pictorial representations of sacred lore, the gift of the magical elephant, being one of the most striking incidents of Vessantara's story, is introduced in the course of the prince's progress, though it really preceded his departure from his royal home and all the incidents which followed as recorded by the *Jātaka*. One of the earliest of these is the encounter with the four Brahmans to whom the gift of the horses is made. There can be no possible doubt that these are represented by the four figures of mendicants who in the frieze come to meet the prince amidst sylvan scenery. Was it adherence to another version of the legend or merely artistic licence which brought them here face to face with the prince leading the elephant? No safe answer seems possible at present. Nor can we hope to learn whether the reappearance of the chariot and quadriga immediately beyond, on the broken part of the frieze before the big westward gap, relates to the incident about the gift of the chariot to another Brahman as told in the *Jātaka*.

Painter's adherence to legendary details.

Whatever freedom the artist may have claimed in selecting and arranging the scenes for his composition, we note close adherence to the legend in several characteristic details. Thus the jewel-bedecked appearance of the prince in each scene is manifestly designed to emphasize 'the priceless ornaments which he wore on his body', as the *Jātaka* tells us, and which he also distributed to beggars when leaving the city. The same intention seems to have guided the painter's hand in the presentation of the miracle-working white elephant, which might well pass for an exact illustration of its wonderful ornaments so diffusely recorded in the *Jātaka*. The description there given is too long to be quoted *in extenso*.[8] It may suffice to note from this fairy-tale inventory that 'on his back were nets of pearls, of gold, and of jewels, three nets worth three hundred thousand, in the

[5] See Cowell and Rouse, *The Jātaka*, vi. p. 264.

[6] Cf. e.g. the mention of boy and girl, *loc. cit.*, pp. 252, 264 sq., etc., with the two sons referred to *loc. cit.*, pp. 257, 264. I am unable to spare time for following up this variation of detail in other versions of the legend.

[7] See *loc. cit.*, vi. p. 283.

[8] See Cowell and Rouse, *The Jātaka*, vi. p. 253.

two ears two hundred thousand, on his back a rug worth a hundred thousand, the ornament on the frontal globes worth a hundred thousand . . . those on the two tusks two hundred thousand, the ornament on his trunk a hundred thousand'. The equally significant detail of the sacrificial jug carried by the prince has already been referred to.

Remnants of scenes on N. hemicycle.

The almost complete destruction of the frieze on the wall of the north hemicycle must be all the more regretted because it has prevented us from seeing how the artist had treated the later and particularly dramatic incidents of Vessantara's story. It would have been interesting to compare his treatment of them with the description that Sung Yün has left us of the representations, probably painted, which he saw at the sacred site near Shāhbāzgaṛhi, where Buddhist tradition of Gandhāra had localized the legend, and which, he tells us, were so touching that even the barbarians could not withhold their tears on contemplating them.[9] As it is, we must feel gratified that M. Foucher's happy identification enables us to recognize and interpret certain characteristic figures, even among the scanty and badly injured remnants of the lowest part of the frieze. Thus the lion visible in Fig. 143, the yellow-skinned animal with black spots, and another crouching beast further on are likely to represent the lion, the tiger, and the pard whose shapes three gods assumed in order to delay Maddī's return to the hermitage and to protect her from the wild beasts of the forest while the wicked Brahman carried off her children as a gift from the prince. The youth seen on the right of Fig. 141, astride a galloping animal with the head of a horse and the body of a beast like those confronting the lion in Fig. 143, may be meant for one of the princely children disporting himself among the strange beasts of the jungle. The two men in scale armour seen in the same fragment of the frieze, and appearing also in another, might possibly have been intended to symbolize as it were the great armed host which, as the *Jātaka* tells us, the king, Vessantara's father, took with him when he proceeded into the forest to recall his saintly son and bestow the crown upon him.[10]

Section VII.—THE PAINTED DADO OF CELLA M. v

Festoon decoration.

Leaving the interpretation of the short inscriptions which appeared on the well-preserved part of the frieze to be discussed further on, we may now turn to the fascinating cycle of figures which formed the dado at the foot of the painted cella wall. The undulating festoon connecting and framing these figures was a feature plainly Hellenistic in origin and type. We have had occasion to show above how frequent a motif it was in the decoration of Gandhāra relievo panels, and to point out the general resemblance in the figurative personnel combined with it there and in our dado. But before we proceed to review these figures in their striking variety, a few details about the festoon itself may conveniently be recorded here.

Arrangement of festoon.

The festoon, as clearly seen in Figs. 134–40, was formed of a wreath painted in black, about five and a half inches wide, and arranged in alternately rising and drooping curves. Including the width of the wreath, the maximum height of the festoon was about 1 foot 8 inches. The descending curves, which formed the lunettes filled by a succession of portraits, were slightly wider than the ascending curves borne on the shoulders of youthful supporting figures. This accounts for the latter being painted on a somewhat smaller scale than the portrait busts. The distance from the centre of one ascending curve to that of the next measured on the average 2 feet 7 inches. If we assume this dimension for the lunettes to have been observed throughout, and from the ascertained diameter of the cella, 26·5 feet, calculate that its circumference along the circular passage wall was approximately 83·26 feet, we are led to infer that, excluding the width of the entrance,

[9] Cf. Foucher, *L'art du Gandhâra*, i. p. 285; Chavannes, *Voyage de Song Yun*, pp. 413 sq., 419 sq.

[10] See Cowell and Rouse, *The Jātaka*, vi. pp. 299 sqq.

about 5 feet 1 inch, the surface of the wall available for the painted dado could accommodate a total of thirty lunettes with the corresponding number of portraits within them. If there ever was an entrance or a window reaching down low on the west side, where I found the passage wall completely broken, the total number of lunettes and portraits would have been limited to twenty-eight. Out of these, as we shall see, twenty could still be traced, though some only in very imperfect outlines.

Ornamentation of festoon.

The raised portions of the wreath on either side of the supporting figures had a fastening ribbon, usually double and of greenish-buff colour. Below and above each ribbon the wreath was decorated with triplets of small balls representing flowers, alternately pink and white. Ribbons in exactly the same position are also found on festoons of Gandhāra relievos,[1] and examples of flowers fixed to the wreaths would probably be traceable on closer examination. At the bottom of the drooping curve of the festoon and partly covering it there was always painted a curious oval object resembling a wide turned-down jar. It can be seen in part in Figs. 134, 135, but had generally suffered badly through effacement. Its colours, where they could still be made out, varied much. There was solid black edged with pink dots resembling small flowers; crimson; white; bright red; slaty grey, and in one case pink filled with small seed-like dots in black. The true interpretation is furnished by a comparison with the festoons of the Gandhāra relievo, where we very often see the drooping portions weighed down by big fruits suggesting gourds or melons.[2] The background of the dado was of a pale buff colour. Within the lunettes, on either side of the head and between it and the festoon, was painted a rosette, six- or seven-petalled, of the conventional type common in late Hellenistic art (see M. v. vi in Plate XLIV). The colours of these rosettes were always green on one side and pink or white on the other.

Amorini and other festoon supporters.

The youthful supporters of the festoon were always standing figures of three-fourths length. Among them two distinct types were represented, both unmistakably classical in origin and design, and treated with an animated freedom and a variety of individual expression which clearly bear the impress of Hellenistic art. To one type belonged the wingless *amorini*, of which we see characteristic specimens in Figs. 134, 138, 140. The other was represented by youthful draped figures wearing the Phrygian cap, and, in spite of a certain girlish cast of face, unmistakably recalling the figure of the young Mithras, whose worship had spread from the Īrānian marches of the Hellenistic East to the most distant provinces of the Roman empire. Specimens of this type are seen in Figs. 135, 136, 137, 143, and one particularly good, though poorly preserved, head is found in the fresco panel M. v. x (Plate XLIV). It is of interest to note that among the wingless *amorini* which carry the festoons of the Gandhāra relievos draped figures of children are not altogether unknown.[3] Another point of contact with the arrangement of these sculptured panels is the way in which the festoon-carrying figures of the dado usually faced each other in pairs.[4] Their function necessarily implied a certain limitation of the poses. Yet there was an obvious effort made to introduce a pleasing variety, not merely in facial features and the expression of the eyes, but also in the position of the arms and hands. Thus some *putti* were shown with both arms passed behind the festoon and their fingers resting on its edges (Fig. 138); others carried the festoon only on one shoulder, usually the left (Figs. 134, 135, 140, 143), while one or two among them had a small appropriate object, such as a grape or patera (M. v. x, Plate XLIV), placed in their right hand. It was, no doubt, also due to the same love of variety that the *amorini* and Phrygian-capped youths were either introduced alternately or else, when placed in pairs, always made to face each other.

Cycle of girls and youths.

This happy association of wingless Erotes and childlike Mithras figures seemed symbolic of the

[1] Cf. e.g. Foucher, *L'art du Gandhâra*, i. Fig. 118.

[2] See below, Pl. XLI; Foucher, *loc. cit.*, i. Figs. 117, 118.

[3] Cf. the panel on left of Pl. XLI.

[4] Cf. Figs. 135–36, 138–40; Foucher, *L'art du Gandhâra*, i. p. 240.

two main influences reflected by the remarkable portraits which filled in succession the hollows of the undulating festoon. In each of them there rose the head and bust of a man or girl, presented with a freedom of individual expression which made the effect most striking, in spite of the often faded colours. In the drawing and the method of painting, the influence of Hellenistic art appeared quite as predominant as it undoubtedly is in the Graeco-Buddhist sculpture of Gandhāra. But with it there seemed to mingle, though in a far less pronounced fashion, the influence of types which the renascent art of ancient Īrān had affected. With one exception, and that of the portrait of the Indian prince manifestly borrowed from the frieze above, there was nothing in these portraits to suggest that the art which found expression in them had received any Indian impress. It was obvious at a glance that none of the figures united in this strangely fascinating cycle could have any relation to the Buddhist worship which the shrine was intended to serve. Even without the evidence furnished by so many of the purely decorative relievos of Graeco-Buddhist art, we could hardly fail to realize that the object of the whole dado cycle was frankly to please the eyes. Nor could it, perhaps, surprise those who have read in my Personal Narrative of the trying conditions under which my work at this site and for months before was done, that the contrast presented by these gay figures made me at first look upon them as if they had been designed to personify the varied pleasures of life.

First figures of S. dado.

As in the case of the frieze above, it will be best to begin the detailed description of the surviving portions of the dado from the left end of the south hemicycle, just where it must have begun to unfold itself to the eyes of pious visitors starting their circumambulation of the Stūpa. On the wall immediately adjoining the entrance to the circular passage, the festoon started with the middle of an ascending curve, where the wreath was secured with the usual ribbon, here scarlet in colour and continued as a scarf hanging downwards. The first lunette was filled with a large crimson flower nearly a foot across, having petals and sepals of a conventional type and a circular centre in buff with small red rings representing seeds or stamens. The next upward bend of the festoon was carried by the *amorino* who is seen in Fig. 134 holding his right hand against his breast and draped round the hips with a brick-red loin-cloth. The hair on his forehead was dressed with the double-leaf lock familiar to us from the 'angels' of M. III. In this and all the other figures of the dado the 'light and shade' treatment of the flesh could, owing to the larger scale, be observed quite clearly, being the same as that detailed in the description of the fresco panels from M. III.

Girl playing on mandoline.

The succeeding lunette was filled with the portrait of a graceful girl (Figs. 134, 135, 139), playing on a four-stringed mandoline and turning her eyes demurely downwards. Her rich black hair was dressed on the forehead in the fashion already described above in the fresco fragment M. III. 0019 (Plate XLIV), and gathered in a bunch behind the neck with a crimson ribbon running round it. A diadem made up of red beads, with two large and two small red jewels in the centre, stretched over the hair on the forehead. A large wreath of white roses, with pink stamens in their centres, encircled the head. A curly love-lock descended before each ear, from which hung a crimson flower. The full sensual lips harmonized with the elaborate adornment of this mature beauty, and the glowing effect was heightened by the rich crimson of the cloak thrown over her left shoulder and across part of her slate-coloured vest. To the right the festoon was carried by a Phrygian-capped youth with both hands resting on it. A close-fitting green garment descended from the neck to above the knees; the buff cap covered the ears and part of the neck with its long flaps.

Bearded male head.

In the hollow following there was seen the head and bust of a bearded male figure (Figs. 135, 139), facing the girl just described and striking in features and dress. The heavy mass of curly black hair, the bushy moustache, and long beard were by themselves sufficient clearly to distinguish this head from the almost classical male heads represented among the other portraits. In the

expression of the eyes, the heavy eyebrows meeting above the broad nose, the low forehead, and thick lips there seemed something curiously suggestive of the type by which late classical art represented northern barbarians, such as Scythians or Gauls. The right hand raised against the breast held a goblet, no doubt meant to be of glass, since the colours of the dress behind were made to shine through it. The coat of pale bluish-grey was crossed in front by a broad scarf showing bold arabesques in red and black over cream ground. Everything about the face, pose, and dress seemed to convey that whole-hearted attachment to the good things of this world which, judging from early Chinese accounts and other evidence, seems always to have been the predominant note in the character of the people inhabiting the oases of Eastern Turkestān, just as it is at the present day. As if prompted by an appropriate association, the painter had made the Phrygian-capped youth supporting the festoon immediately to the right carry a bunch of crimson grapes in his hand. The photograph reproduced in Fig. 136 has unfortunately failed to bring out this detail. The carefully painted figure with its large dreamy eyes was dressed in a closely-fitting green vest with sleeves, and carried a mauve-coloured cap or hood, beneath which small curly locks appeared fringing the forehead.

Bust of Indian prince.

The male bust occupying the hollow of the festoon beyond could at a glance be recognized as an exact replica of the figures representing Prince Vessantara in the frieze above. It was evidently not by mere chance that this portrait had found its place in the dado just below the scene showing the prince in the act of giving away the white elephant. The appearance of this animal, emblematic of India, would suffice to make the position particularly appropriate if an Indian, too, was to be included in this striking cycle of portraits. The features of the face, clean-shaven except for a small curling moustache, such as the Graeco-Buddhist sculptors had borrowed for their favourite representation of Gautama Bodhisattva, probably from contemporary Indian fashion, and the dreamy-looking eyes conveyed an unmistakably Indian expression of softness. The locks of black hair descending below the ears helped to give an elongated appearance to the face. The head-dress conformed in all details to that worn by the Vessantara figures, and need not be described here again. The ample cloak of light green was thrown over the left shoulder. The greater part of the breast being thus left bare seemed, by contrast with the fully-draped appearance of the other portraits in the cycle, as if intended to mark out a stranger introduced from the far-off south. The large ornament in the ear, the broad jewelled band round the neck, and the heavy bracelets, all painted in dark red, are familiar to us from the frieze. Yet here, with this Indian figure brought into a company wholly worldly, they might, perhaps, be interpreted as symbolizing that naïve delight in rich jewellery to which Indian manhood of high rank has always been peculiarly prone, as is proved by abundant evidence, including the sculptures of Gandhāra. The right hand seemed to raise a fruit, which by its shape and colour, a clear buff with red edge, suggested a pomegranate.

Girl carrying decanter.

On the right, beyond an *amorino* with the leaf-shaped lock on the forehead and a reddish-brown loin-cloth over the hips, there appeared in the next lunette the portrait of a beautiful girl, carrying in graceful pose on her left shoulder a narrow-necked decanter of transparent ware and in her right hand a white patera (Figs. 138, 140). Her large eyes full of animation, turned half to the left and slightly upwards, seemed to offer a greeting to the visitor approaching from the entrance in the orthodox fashion. In her delicate and carefully drawn face, Greek features seemed to mingle strangely with others which recalled a Levantine or Circassian type of beauty. The white turban resting on the rich black hair pointed to the Near East or Īrān. A red trimming passed across it to the right, where a black knob was fastened on with a red band. Long ringlets curling upwards at their ends descended in front of the ears, and a broad fringe of hair came down on the forehead decorated with three strings of red beads, probably representing corals. Long graceful pendants in

ii iii

139. PORTION OF PAINTED FRIEZE AND DADO ON SOUTH-EAST WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRAN SITE.

v vi

140. PORTION OF PAINTED FRIEZE AND DADO ON SOUTH-WEST WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRĀN SITE.

141. FRAGMENT OF PAINTED FRIEZE ON NORTH-EAST WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRĀN SITE.

143. PORTION OF PAINTED FRIEZE AND DADO ON NORTH WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRĀN SITE.

142. INSCRIPTION ABOVE PRINCE RIDING, IN PAINTED FRIEZE ON SOUTH-EAST WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRĀN SITE.

144. INSCRIPTION ON ELEPHANT'S LEG IN PAINTED FRIEZE ON SOUTH WALL OF ROTUNDA PASSAGE IN SHRINE M. V, MĪRĀN SITE.

pink hung from the ears, and bracelets of the same colour clasped the wrists. A close-fitting garment in a deep red brown, crossed in front and provided with sleeves, covered breast and shoulders, leaving the neck free. From the head-dress hung a veil of delicate pale green descending over the left shoulder and across the left side of the breast.

Male head of Western type.

The *amorino* on the right (Fig. 140) carried the festoon in a debonair fashion with his right hand placed on the hip, which a green wrap covered. His chubby face was thoroughly Western and excellently painted. He seemed intent on turning his gaze towards the fair lady, his neighbour. My eyes, too, felt the spell of this fascinating apparition of beauty and grace, set off as it was by the desolation of the ruin and the desert around. But it was quite as strange to find this fair portrait balanced on the opposite side by that of a male head of a type distinctly Western, with a suggestion of Roman (Fig. 140). It was the head of a young man, short and square, with a broad low forehead, flat skull, and square jaws. The details of the features can still be clearly made out in the piece of the actual wall-painting (M. v. vi, Plate XLIV) which I managed to bring away, though in a badly broken condition, as will be explained below. The large and straight-set eyes were surmounted by well-arched brows. The strongly-built face was clean-shaven, the close-cropped black hair coming down a short way in front of each ear. The treatment of the flesh with 'light and shade' was the same as in the heads of the M. III dado. The colours of the dress, consisting of a dark red coat or toga and a pale green cloak thrown over it across the right shoulder, had badly faded. The right arm was raised across the breast, and in the original fresco I could clearly make out the peculiar pose of the hand, no longer recognizable in the photograph, which suggested a player at the classical game of Mora, with the second and fifth fingers outstretched and the two between turned downwards.

Last lunette of S. hemicycle.

Beyond this portrait the painted surface of the wall, though it still rose to the height of the dado for a distance sufficient to accommodate three lunettes, was too badly effaced by the fallen brick débris to retain any remains of the figures. But close where the breach in the western wall began, some scanty traces of a girl's portrait once filling a festoon hollow survived, and to the right of them the figure of a Phrygian-capped youth supporting the wreath (M. v. x, Plate XLIV). The figure was badly broken across the neck and lower down when still on the wall, and the portion I managed to remove, experimentally as it were, has, owing to the very brittle condition of the plaster, necessarily suffered still more. Yet even thus it is possible to realize the beauty of the delicate-featured face, with its graceful oval outline and widely-opened vivacious eyes, and the clever shading of the flesh tints. Underneath the cap of whitish buff is seen a narrow fringe of black hair, and traces of a red garment survive. The right hand with shapely fingers raises a brown-rimmed bowl against the breast, as if in the act of drinking. Of the portrait which followed nothing remained but the barely recognizable outlines of a male figure holding a patera with the right hand. Beyond this the wall had been completely destroyed.

Figures in north arc lunettes.

Where the wall of the circular passage reappeared at the left end of the northern arc, the surface plaster was found to have suffered badly. Consequently, of the first figure met there—it filled the ninth lunette counting from the right or eastern entrance end of this arc—it could only be ascertained that it was a male one, bearded and with flowing hair, dressed in a black vest with a green upper garment. Next came a figure, with a remarkably well-drawn head, carrying the festoon and wearing a Phrygian cap and green dress. The hollow between this and another young 'Mithras' *putto*, which was in poor preservation, held a girl's head and bust. Though badly effaced in most places, it still showed large lustrous eyes looking straight ahead and rich tresses hanging down the shapely well-drawn neck. A reddish-brown vest with a black stole formed the dress. The right hand seemed to hold the end of a three-stringed musical instrument. Of the male head

in the next lunette the portion above the eyes was effaced. Below, it displayed thick black locks, a bushy moustache, and a pointed curling beard. The dress was green, open at the neck where a broad reddish-brown scarf was laid over its edges, forming a triangle.

Amorini flanking girl's bust.

The following two lunette figures are seen in Fig. 143. Of the two *amorini* which flanked the first and as usual faced each other, the one on the left was depicted in a playful pose, holding his turned up left foot with his right hand. Both had the peculiar leaf-shaped lock over the shaven forehead. In the festoon-hollow between them there appeared a beautiful girl, looking to the left with a happy, smiling face. Over her rich black hair, gathered apparently in a bunch behind the neck, she wore a crown of white flowers set out with scarlet blossoms. Long curling love-locks descended before the ears, from which hung red ornaments. Over a richly-folded coat in buff was laid a greenish-grey mantle covering the left shoulder. The features of the youth whose head and bust filled the following lunette seemed reminiscent of the Near East. His curly black hair was cut straight over the low forehead, with narrow locks descending half-way down the ears. There was an indication of a thin growth of hair round the chin and jaws. The right hand (which in the photograph has suffered some disfigurement by erroneous 'touching up' but is quite clear in a photograph taken in 1914) was raised in the pose of the 'Mora-player' already described, with the second and fifth fingers stretched out and the rest turned inwards. His dress consisted of a green sleeveless vest over a flesh-coloured undergarment, of which the folds, drawn in a classical fashion, appeared over the right arm. Heavy folds were shown, too, on the pink upper garment of the festoon-carrying figure to the right, which wore a mauve Phrygian cap and a skirt of green.

Figures in remaining lunettes.

The remaining figures of the dado towards the eastern end had all more or less suffered through the plaster surface having peeled off in places or lost its colouring. As besides, owing to photographic difficulties to be explained presently, I am unable to illustrate them, their description must be brief. The next lunette contained the graceful head of a girl with black hair hanging in loose tresses below the neck, and encircled on its crown by a crimson creeper. She wore a green undergarment with a cloak in light pink laid over both shoulders and parts of the breast. The fingers of the right hand emerged from beneath this cloak and clasped its edge, in the pose so familiar from classical sculptures draped in the toga. Beyond a Phrygian-capped festoon supporter with pink cap and green shirt facing his *pendant* there followed a bearded male head, almost completely broken. A conical cap in buff and a black scarf passed crosswise over shoulders and breast, as in Fig. 139, combined to suggest that the representation of a 'barbarian' had been intended. Finally, between two *amorini* effaced almost beyond recognition, there appeared the broken remains of another male head with long black hair, imperial, and a pointed moustache twisted upwards. This figure, too, wore a broad scarf, here reddish brown, laid crosswise over the breast, and manifestly represented a 'barbarian' type. The last lunette of all, where the festoon ended on the north side of the entrance, was filled, just as the one marking its commencement on the opposite side, with a large rosette in crimson similar to that there described.

Western art spirit in dado figures.

The detailed examination of the dado now completed makes it easier for me to explain a point which forced itself upon my attention while I had these mural paintings actually before me, and continued to puzzle me for a long time after. It was the difference, unmistakable and yet difficult to define, between the artistic treatment of the composition in the frieze above and that of the figures in the dado. In the latter almost everything—the decorative scheme as a whole, the style of design, the technique of colouring with its illusionist use of *chiaroscuro*, the marked freedom with which each figure was treated—pointed strongly to the work of a painter who was mainly reproducing types fully developed by Orientalized Hellenistic art, and yet had sufficient familiarity with its spirit, and first-hand knowledge of its methods, to give an individual air to each of his portraits.

Looking at his work in the dado, I felt no need to ask myself what these gay figures carrying and enlivening the festoon decoration meant. It was enough for Western eyes to perceive, and to be gladdened by, the beauty and joy of life pervading almost all of them.

Treatment of legend in frieze.

It was scarcely surprising that while my eyes rested on the dado, I felt often tempted to believe myself rather among the ruins of a villa in Syria or some other North-Eastern province of the late Roman empire than among those of a Buddhist sanctuary on the very confines of the true land of the Seres. When I looked at the frieze, the impression was very different. The numerous points of resemblance in technique, etc., not to mention the identity of the Indian prince's figure, left no doubt that the same hand had been at work here. Yet, though many features, such as the drapery and quadriga, could manifestly be derived direct from late classical art, there was plenty to justify the impression that the painter was here following models which had already been adapted to, and fixed by, the far stiffer moulds of a distinctly Indian tradition.

Convention of Graeco-Buddhist art.

Though much must necessarily remain obscure or purely conjectural at present, the identification of the Buddhist legend represented in the frieze goes far to explain that impression. In the frieze, it is clear, the painter, wherever his original home may have been, was obliged by the sacred character of the subject to cling closely to the conventional representation which Graeco-Buddhist art, as established in the extreme North-west of India, had probably centuries before adopted for that favourite legend. On the other hand, as regards the dado we are tempted to assume that the purely decorative and frankly secular character of the composition left him free to yield to artistic influences from the West which were more direct and more recent. If I had been asked on the spot to express my explanation quite briefly, I should not have hesitated to offer the conjectural answer that the Graeco-Buddhist style of India gave its impress to the frieze, and that the contemporary art of the Hellenized Near East, as transmitted through Īrān, was reflected in the dado.

Section VIII.—KHAROṢṬHĪ INSCRIPTIONS OF M. v AND THE REMAINING RUINS OF MĪRĀN

The explanation suggested merely by differences which the artistic treatment of the frieze and dado displayed has since received striking and wholly unexpected support from the interpretation of one of the two short inscriptions in Kharoṣṭhī, already mentioned, which appeared on the well-preserved southern portion of the frieze. I had taken careful tracings of them and assured myself from a few words readily deciphered on the spot that their language was the same Prākrit in which the documents of Niya, Endere, and Lou-lan are written.

Inscription on elephant's leg.

There were points attracting my special attention to the inscription which was written in clear black ink over the right thigh of the elephant (Fig. 144). It consisted of three short and slightly curving lines. Though the neatly painted characters were only from a third to about half an inch high, the white background of the elephant's skin made them very legible. It was thus easy for me to see that their writing, being rather wayward both in direction and spacing, distinctly differed from the straight regular ductus of the inscription found written in larger characters above the palace gate, evidently by a practised clerical hand. This inscription, quasi-lapidary in appearance, might be assumed to designate the figure of the prince seen riding immediately below it. The writing on the elephant's hind leg seemed too long for a record naming the scene or actor represented. On the other hand, it did not look like a mere *sgraffito* of some passing visitor, especially as the place for it had evidently been selected with care. Thus a combination of rather slender arguments led me at the time to form a vague conjecture that this little inscription might possibly prove to contain some brief record, conspicuously placed on purpose, about the painter himself.

M. Boyer's interpretation of record.

I had almost forgotten this guess when to my surprise, more than three years later, it was confirmed by the close examination which M. l'Abbé Boyer was kind enough to make of the inscription from my photographs and tracing. According to the detailed observations which he has furnished on the decipherment and interpretation of this record in his paper *Inscriptions de Miran*,[1] the three lines have to be transcribed as reading:

titasa eṣā ghali
hastakrica [bhaṃma]ka
3 1000

and translated as meaning: 'This fresco is [the work] of Tita, who has received 3,000 Bhaṃmakas [for it].' The only elements of doubt which might possibly affect this rendering arise from the crack of the plaster which passed through the first two Akṣaras of the word [*bhaṃma*]*ka*, and from the absence of textual confirmation for the meaning 'piece of money' given by Indian lexicographers for the Sanskrit term *bharman*, of which it appears to represent the correct phonetic derivative. But, as duly pointed out by M. Boyer, the clearness of the numerals following and of the preceding word *hastakrica*, i. e. Skr. *haste kṛtya* 'having received', makes it certain that the word in question, even if it should be read and derived differently, must designate some monetary value.

Painter's name *Tita*, i.e. Titus.

The real interest of this curious little inscription lies, however, elsewhere than in its probable mention of the painter's wages; for if we accept M. Boyer's interpretation—and to me its critical soundness appears to be beyond doubt—I can feel no hesitation about recognizing in *tita*, which is the painter's name inflected as a genitive, the familiar Western name of 'Titus'. *Tita-* is a noun form which we could not etymologically or phonetically explain as an indigenous growth in any Indian or Īrānian language at the period marked by the ruined Mīrān temples. On the other hand, the analogy of many Greek and other foreign names borrowed by ancient India from the West proves that *Tita* is the very form which we should expect the name 'Titus' to assume in the Sanskrit or Prākrit adopted for official and clerical use in a Central-Asian region far beyond the Indian border.[2]

Classical names met in India.

There is sufficient evidence to prove that Titus was, during the early centuries of our era, in popular use as a personal name throughout the Roman provinces of the Near East, including Syria and other border regions towards Persia.[3] Recent archaeological discoveries in India have made it equally clear that men with good classical names, like the Agesilaos named on Kaniṣka's Peshawar relic casket, Theodoros, and Heliodoros,[4] found employment as artists and royal servants, not in the Indus region alone but far away in the Indian peninsula, down to the times of Kuṣana rule. This practice, whatever the obscurities of its early chronology may be, can safely be assumed to have extended in the border lands of India and Īrān down to the third century A.D., if not later. That the date of the Mīrān temples cannot be far removed from the end of this period has been made sufficiently obvious already by all the archaeological and epigraphical evidence that we have had occasion to discuss above.

Influence of Hellenistic art of Near East.

The wall-paintings of these temples bear particularly eloquent testimony to the strength and

[1] See *Inscriptions de Miran, par M. A.-M. Boyer, Journal Asiat.*, mai–juin 1911.

[2] It must be borne in mind that the transcription of Titus into **Tita* was in this case not likely to have been introduced from an Indian-speaking region, but was adopted on the spot among a population to which the definite distinction between dentals and cerebrals was as foreign as it is to Europeans. Even in names undoubtedly transcribed among Indian-speaking people of the North-west border lands we find *t* used indiscriminately with *ṭ* to render a Greek *t*. Cf. e. g. the confusion of dentals and cerebrals in 'Dardic' languages.

[3] Cf., e.g., *C.I.L.*, III. p. 2415 (Index). As regards the use of the name in Palestine during the early Christian centuries Dr. A. Cowley refers me to the Jerusalem Talmud.

[4] Cf. Sir J. Marshall's paper, *Archaeological Exploration in India, 1908–9, J.R.A.S.*, 1909, p. 1058, with *Indian Antiquary*, 1908, p. 66, regarding *Thaïdōra* as a reproduction of the name Theodoros.

directness of the influence then exercised by the Hellenistic art of the Near East even in this remote corner of Central Asia. Hence it need cause no surprise that one of the artists employed on them should have borne a name which must have been common in those times among the Oriental subjects of Rome or Byzantium from the Mediterranean shores to the Tigris. It is as a sort of Roman Eurasian, largely Oriental by blood but brought up in Hellenistic traditions, that I should picture to myself this painter-decorator, whom his calling had carried, no doubt through the regions of Eastern Īrān impregnated with Buddhism, to the very confines of China.

Near-Eastern art influence affects Bactria.

That men of much the same origin had travelled there, to the 'land of the Seres', long before him is a fact which is fortunately proved by a classical passage of Ptolemy's *Geography*. In it he speaks of the information about the great trade route connecting Syria with the capital of the Seres which the geographer Marinus of Tyre (*circ.* A. D. 100) had obtained through 'Maës, called also Titianus, a Macedonian, and a merchant like his father before him', who had sent his agents by it.[5] And as in Ptolemy's pages we follow their track from the Euphrates and Tigris north-eastwards to their distant goal in the land of the silk-weaving Seres, we find that it carries us through Persia to that very region of Bactria where Buddhism had established its oldest Central-Asian home, and where for many centuries it continued to flourish. There is much to suggest the conjecture that in Bactria men like the painter of our Mīrān frescoes might best have learned to apply their skill as versatile craftsmen to the adornment of Buddhist shrines. But not until the ruined mounds around Balkh and the cave-temples in the Hindukush valleys to the south have been systematically explored can we hope to define and localize clearly the chief stage where Graeco-Buddhist art on its way to China underwent Īrānian influences.

Foreign painter's own record.

Without following up further the fascinating glimpse into the art history of innermost Asia which this small inscription, if rightly interpreted, opens for us, I may appropriately mention here an interesting epigraphic conclusion which suggested itself to M. Boyer when first informed of my proposed identification of *Tita* as Titus. It may best be reproduced here in the eminent Indologist's own words: 'Sur quoi je remarquerai que, admise l'identification de Tita = Titus, nous aurions peut-être là une explication des irrégularités d'écriture signalées plus haut, je dis celles qui concernent le tracé des akṣaras *ca* et [*bhaṃ*]: l'auteur de l'inscription étant, il n'y a pas lieu d'en douter, l'auteur de la fresque elle-même, elles seraient attribuables au fait que cette inscription fut tracée par un étranger, doublé d'un artiste.'[6]

Kharoṣṭhī inscription on palace gate.

It only remains for me briefly to record M. Boyer's decipherment of the second short inscription which, as mentioned above, was painted in a regular and clerical-looking hand on the lintel above the palace gate (Fig. 142). Being perfectly clear in my tracing, it could be read with certainty as

eṣe iṣidate bujhamiputre

and rendered as meaning: 'This is Iṣidata, the son of Bujhami.' There can be no doubt that this brief inscription, as M. Boyer rightly points out and as its position from the first suggested, refers to Prince Vessantara seen riding just beneath it. The fact of his being named here *Iṣidata* (from Sanskrit *Ṛṣidatta*) is of interest, but need not surprise us; for it only adds one more to the varying names, *Su-ta-na* (Skr. *Sudāna*), *Hsü-ta-na*, *Sudaṃṣṭra*, by which Vessantara (Viśvantara) is known to Buddhist tradition.[7] Whether the otherwise unknown name *Bujhami* is to be referred to Sañjaya, Vessantara's father, or Phusatī, his mother, as they are respectively named in the *Jātaka* text, cannot be determined. It will be well to look out for these new forms of the names whenever a Sogdian or other Central-Asian version of the legend comes to light among our manuscript finds.

[5] Cf. *Ptolemaei geographia* (ed. C. Müller), I. xi. 6; also Sir Henry Yule's translation, *Cathay*[2], i. pp. 187 sqq.

[6] See *Journal Asiat.*, mai–juin 1911, p. 417.

[7] Cf. Chavannes, *B.E.F.E.O.*, iii. p. 413, n. 7; Watters, *Yuan Chwang*, i. p. 217.

Difficulties of photographing frescoes.

Of the inscriptions it was easy to secure exact copies by means of tracings. But for the frescoes I found it practically impossible at the time to obtain a record worthy of their artistic and archaeological importance. Even a professional photographer, working with special plates and appliances, might have found his skill taxed in the attempt to do justice to the harmonious, but often faded or partially effaced, colours of these paintings under the conditions prevailing. For an amateur like myself they were almost prohibitive. It was difficult enough to squeeze myself, in the bulky fur kit rendered necessary by the bitter cold, into a position low and distant enough to photograph a painted dado just above the floor and on the curving wall of a passage barely seven feet wide. The violent winds rendered photography impossible for days, or else by the thick dust haze raised made the light so poor that prolonged exposure was necessary, with increased risk of the camera shaking in the gusts. The difficulty of securing satisfactory negatives was much increased by the intense cold, which prevented development being done at night except at the risk of the plate freezing in the tent. In order to reduce the risk of total failure, I laboriously took several complete rounds of the frescoes with varying light and exposure. But when development of the plates became possible some four months later, it showed that the record secured was far from being adequate. As a result of this partial failure, it became necessary to strengthen in places the photographic prints shown in Figs. 134–43 before they could be reproduced satisfactorily through the 'half-tone' process. I was fortunately able to entrust this delicate task to the qualified hand of my friend Mr. F. H. Andrews. Combining as he does the artist's eye and the critical archaeologist's accuracy, his help affords full assurance that this 'touching up' was effected with the utmost caution and has not interfered with the faithfulness of the reproductions.

Risks of removing frescoes.

It was a matter of keen regret for me at the time, and has become still more so since, that I had no means of reproducing those fine paintings in colour. The alternative was to remove them bodily from the walls. In spite of the reluctance I felt to the quasi-vandal proceeding of cutting up a fresco composition like the frieze into panels of manageable size, I should have felt bound to attempt it, had not a carefully-conducted experiment convinced me that, with the means and time then at my disposal, the execution of such a plan would have implied grave risks of virtual destruction. The plaster of the cella wall here differed materially from that in M. III. It consisted of two distinct layers, of which the outer one was remarkably well finished and smooth, but only about a quarter of an inch thick and exceedingly brittle. The inner layer, about an inch thick and softer, had very little admixture of straw, and in consequence broke far more easily than the plaster surface of M. III, which, uniform in surface and full of chopped reed straw, possessed more cohesion. When I was, with the help of Naik Rām Singh, very carefully removing the Phrygian-capped *putto* head M. v. x and the male portrait head M. v. vi (Plate XLIV) from the dado, I found it impossible to prevent portions of the thin outer layer of plaster breaking off in fragments, as its backing of soft mud plaster was being loosened from the wall.

Delay for removal impossible.

So I reluctantly realized that there was here no hope of safely detaching any larger fresco panels unless I could first have the brick wall behind systematically cut away by a kind of sapping, and special appliances made for first strengthening, and then lifting off, the curving panes of mud stucco. It was certain that, even if somehow I succeeded in improvising appliances in my desert camp devoid of all resources, it would necessitate the sacrifice of weeks to carry through such difficult operations and to assure safe packing for transport over huge distances. A variety of practical considerations, connected with the physical difficulties to be faced on the journey through the Lop desert to Tun-huang and with the tasks ahead, made it clear that I could not safely delay the start of my caravan, for the new field of work awaiting me far away in the east, beyond the latter half of February. In my Personal Narrative I have fully explained the cogency of these

considerations.[8] So, however regretfully, I had to leave the frescoes *in situ* and trust for their protection to whatever measure of assurance the filling-in again of the interior of the temple could give. As long as possible I kept the wall-paintings open to the sunlight they had not seen for so many centuries, while supplementary tasks in connexion with the survey of the other scattered ruins of the ancient settlement kept me busy. The final duty of all, the careful re-burial of the cella, was accomplished by February 11. It was a sad business to watch those graceful figures, which had seemed so full of life to my eyes in the desolation of the wintry desert, as they slowly disappeared under the sand and clay débris. It would have been far sadder still if I could have foreseen the bitter human tragedy which these remains were destined to witness fifteen months later, and of which my brave 'handy-man' Naik Rām Singh was destined to be the victim.[9] Another sequel may find a record in the note below.[10]

It only remains for me to describe the few other scattered ruins belonging to the earlier settlement of the Mīrān Site. My account of them may be brief. Most of them proved to be decayed Stūpa mounds of the usual type without enclosing rotundas, dug into long before by treasure-seekers, and none of the ruins offered scope for excavations. The largest of them in ground-plan was M. IV, a badly-broken oblong mass of solid masonry situated about forty yards to the west of M. III (see Plate 29; Fig. 111, extreme right). Its longest face, to the south, measured about 46 feet, and near the south-west corner the brickwork, bared by wind-erosion of all débris, still rose to about 12 feet from the original ground, which showed only a few feet of erosion. From the north face a tunnel had been cut through the masonry to near the centre of a solidly built square base of about 32 feet, as it proved to be on careful measurement. To this nucleus, which in all probability had once served as the base for a Vihāra or possibly a Stūpa, there had been added on the east side some later structure, perhaps once bearing small chapels or a flight of stairs. Behind its scanty remains, the plaster mouldings of the original base could still be distinguished here and there. A well dug in the centre of this base down to the natural ground brought nothing to light except a few small bone fragments, probably human. The sun-dried bricks were of unusual strength, and measured sixteen inches square with a thickness of five inches.

Ruined mound M. IV.

About seventy yards to the north of M. III rose a mound of solid masonry, M. VI (Figs. 111, 131). It still stood to a height of approximately twenty feet, but its faces had decayed too much to permit of any exact determination of the original shape and dimensions. The north face, which seemed to have suffered least, measured about forty-six feet and suggested that the ruin, which undoubtedly was that of a Stūpa, had once had a square base. Its bricks measured on the average 16 × 10 × 5 inches. A tunnel cut by 'treasure-seekers' ran from the south face right to the

Stūpa ruins M. VI, VII.

[8] Cf. *Desert Cathay*, i. p. 495.

[9] See below, chap. XXXIII. sec. i.

[10] When I returned to Mīrān in January, 1914, as related elsewhere (*Geogr. Journal*, xlviii, 1916, p. 119), I found the south portion of the circular passage of M. v laid bare, and most of the frescoes of the southern arc broken out and the rest completely destroyed by exposure. According to the Lopliks' statement, this was the result of the operations carried out some three years earlier by a Japanese traveller who had made a few days' stay at the site and carried off such parts of the painted surface as he succeeded in detaching. It is to be wished that, whatever these were, they may have reached their destination in safety and may become ere long accessible to students.

Unfortunately there is only too much reason to fear that these spoils must have suffered badly through haste and perfunctory methods of work. Of such there was sufficient evidence in the fact that the cutting of the brick wall behind, which we had found to be an essential preliminary to safe removal of these frescoes, had nowhere been attempted. The dado of the northern arc had luckily been left undisturbed under the protecting cover which Ibrāhīm Bēg's care had provided. Its removal was safely effected under my personal direction by Naik Rām Singh's capable successor, Naik Shamsuddīn of the 1st Sappers and Miners, and another Indian assistant. That the work, in spite of appliances carefully prepared beforehand and of our continuous labour at high pressure, cost fully twelve days was conclusive proof that on my first visit I correctly appreciated the technical difficulties involved.

centre. The level of the lowest brick course was only about a foot or two above the present surface of the ground. Another ruined Stūpa mound, M. vii (Fig. 130), about 340 yards to the north-east, was similarly decayed on the faces, though solidly built of bricks of about the same size. The base appeared to have been about forty-one feet square, but the arrangement and dimensions of the superstructure could no longer be made out. The extant height of the ruin was close on twenty-four feet. Here, too, a tunnel had been dug right to the centre of the Stūpa, as seen in Fig. 130, which shows the west side. It was again interesting to note that the effect of wind-erosion on the ground adjoining the ruin was surprisingly slight, scarcely amounting even to one foot. It was very different with the scanty remains found to the north, east, and south of this group of ruins, M. iii–vii, and after careful examination of the configuration of the ground I was led to conclude that the slight extent to which the soil at the foot of the latter ruins had been lowered by wind-erosion, nowhere more than three or four feet, was probably due to their sheltered position in a shallow depression.

Structural remains on Yārdangs.

It was significant that the higher portion of the bare gravel-faced plain, both to the north-east and south of this group, was studded at intervals with scattered Yārdang-like clay terraces bearing evidence by their conspicuous height to the far-reaching effect of wind-erosion. Badly corraded pottery fragments were plentiful on this ground. But on one only of these eroded terraces to the north-east, about 700 yards from M. iii, did a trace of structural remains, M. viii, still survive. They consisted of a wall running east to west for about eighty feet along the edge of a Yārdang, some 8–10 feet high, with another much shorter one adjoining at right angles. The masonry, three feet thick and rising nowhere to more than five or six feet, consisted of sun-dried bricks measuring $18 \times 10 \times 4$ inches. To the south a conspicuous clay terrace, M. ix, about 450 yards from M. iii, rose with very steep slopes to a height of 15–16 feet, and proved to be occupied by the walls, now no more than about five feet in height, of a small structure measuring six feet square inside. Its clearing yielded no finds, but the bricks were approximately of the same size as at the temples M. iii, v, and the structure evidently coeval, whatever its character may have been.

Ancient canal lines.

West of it an unmistakable embankment, running its winding course in the general direction from south to north on high ground, clearly marked the line of an ancient canal. Two other slightly divergent lines of the same character could be traced further to the east, as seen in Plate 29. Here I may also mention the small brick mound, M. xi, found on high ground to the west of the first-named canal line and about 500 yards to the west-north-west of M. iii. It rose to a height of about 15 feet, and appeared to have had a base some 17 feet square. In it, too, diggers had been at work. The bricks were large and of two sizes, measuring $21'' \times 14'' \times 4\frac{1}{2}''$ and $17'' \times 13'' \times 4''$ respectively. The numerous small 'Yārdang' terraces, stretching away to the east of M. ix and found also to the north of the route where it passes from M. iii–v to the Tibetan fort (see Plate 29), showed small débris of ancient pottery but, with one exception, no structural remains. Any ruins that may have once occupied the top of these erosion terraces, and caused them to escape the general lowering of the ground level, must have been completely blown away since.

Ruin of domed chamber M. x.

The exception just referred to was formed by a small group of steeply eroded terraces, situated about 340 yards to the south-west of the south-western corner of the Tibetan fort. On one of these, seen in Fig. 132, which was about 11–12 feet high, there rose the conspicuous remnant of a tower-like structure, M. x, quite small but of distinct architectural interest. As seen in Fig. 126, its walls were badly injured outside, and to the south and east had disappeared altogether down to the solid base. But enough had survived of the inside to show that the interior comprised a small room, seven feet square, and a hemispherical dome above it. The structure still rose to about

12 feet in height. The solid masonry base on which it rested was 4 feet 8 inches high and built of sun-dried bricks, measuring on the average 16″ × 8″ × 4–5″, with layers of clay six inches thick intervening between the courses. The same bricks were used in the side walls of the chamber up to a height of about 4 feet 2 inches from the floor, where its square plan was reduced to an octagon by means of squinches set over the corners. On the octagon there rested the dome, constructed of corbelled (horizontal) courses of bricks, of which the lowest started at a height of 6 feet 4 inches above the floor. The bricks used in the dome and in the vaulting of the squinches were burnt, and measured 16 by 8 inches, with a thickness of three and a half inches.

Squinch used below dome.

The use of burnt bricks alone would suffice to make the small ruin remarkable at this site. But even more interest is to be found in the constructive method employed for effecting the transition from the square to the circle. The use of the squinch (the *trompe* of French architectural terminology) as a 'means of setting the dome upon a square base' is abundantly attested in Syria, Asia Minor, and other parts of the Near East from the fourth century A.D. onwards. Thence it was carried by Byzantine architecture into the West. But all the leading authorities are agreed that this architectural feature is only one of the characteristic loans which Byzantine art had made from the Middle East, and that the use of the squinch is of Persian origin and far earlier date.[11] This is not the place, nor is there any need here, to discuss its constructive nature and function. But I may point out that the insertion of windows by the side of the squinches, such as Fig. 126 shows to have existed in the small domed chamber of M. x, is also illustrated by what seems the earliest extant Persian instance of the use of the squinch, in the palace of Sarvistān, and is quite common.[12]

Voussoirs of burnt bricks in squinches.

Considering how vast the distance is which separates our modest, small ruin by Lop-nōr from that probably Sassanian palace,[13] every detail in the former deserves our attention as a further possible point of contact with the architectural methods of Western Īrān and the Near East. Therefore I may specially mention that the vaulting in the squinches of M. x has been effected by voussoirs of burnt bricks which are set so as to form a succession of pointed arches, each gradually reduced in height and width. It is certainly the earliest instance known to me in Eastern Turkestān of vaulting with voussoirs instead of corbelled courses. It is also of interest to note that the squinches and the dome above are built with burnt bricks, the rest of the structure being of sun-dried bricks. A similar distinction in the materials used, clearly due to constructive reasons, is also met with not unfrequently in early Persian domed structures, e.g. in the palace of Sarvistān, where the dome of burnt bricks is set by means of squinches over square walls built of roughly-hewn stones.[14]

Circular cellas in Western Asia.

Here I may conveniently take occasion to point out how that connexion with architectural forms, familiar to Western Asia in the early centuries A.D., which we have just traced in the case of M. x, may help us to recognize also the true significance and relationship of the structural features observed in the shrines M. III and M. v. The plan of the circular cella which these ruins exhibit was equally well known both to the late heathen-antique and to the Early Christian architecture of the Near East. There is abundant archaeological evidence to support the view taken by very

[11] Cf. Diehl, *Manuel d'art byzantin*, pp. 89, 160 sq.; Strzygowski, *Amida*, pp. 177 sqq., 183 sqq.; and particularly the illuminating summary of Miss Gertrude L. Bell in *The Thousand and One Churches*, pp. 440 sq.

[12] Cf. Strzygowski, *Amida*, p. 180. For an early Anatolian example of the same arrangement, in the Church of Sivri Hissar, cf. *The Thousand and One Churches*, p. 381, Fig. 305.

[13] The dates ascribed to the palaces of Sarvistān and Firūzābād vary from the Achaemenidian (Dieulafoy) to the Sassanian period (Flandin and Coste); cf. Miss G. L. Bell's note in *The Thousand and One Churches*, p. 311.

[14] See Strzygowski, *Amida*, p. 180 with illustration.

competent authorities that this round form of the ground-plan is Oriental in origin.[15] In any case, it is certain that long before Constantine's great building activity introduced it, together with the closely allied octagonal scheme, into Byzantine architecture, it had been familiar to the Hellenistic East. There this 'centralized' type of building was a favourite form for temples, some of them very famous, like the Serapeion at Alexandria, which served cults of Asiatic origin adopted by the classical world into its syncretistic Pantheon.[16]

Architectural links with Īrān and Near East.

It is impossible for me here to follow up the interesting questions which are raised by the connexion thus suggested between our circular shrines of Mīrān, with their counterparts in Gandhāra, and the examples in the Hellenized East. Nor can I give more than mere mention to Professor Strzygowski's important observation that, as far as the pre-Islamic period is concerned, the domes traceable in Persia are set mainly over square structures, and those in the region of Hellenistic art mainly over circular or octagonal ones.[17] It is clear that whatever fascination such questions must present to the student of the history of architectural art in the East, no safe answer to them can be hoped for until we have recovered, if possible in the shape of structural remains, more links of the chain which once stretched from Syria and Mesopotamia across the Pāmīrs. Nowhere is the likelihood of the discovery of such links greater than in ancient Bactria and the regions adjoining it, and once more I must give voice to my old wish that they may soon become accessible to archaeological research.

Finds in ruin M. x.

Débris of brickwork, together with refuse of reed straw and dung, filled the surviving corner of the small cella M. x to a height of close on four feet. But apart from pottery fragments like M. x. 003 and miscellaneous small rags of woollen fabrics, M. x. 002, some of which resembled in texture fabrics found at the Niya Site, the only object brought to light was a rolled-up piece of soft cream-coloured silk, M. x. 001. From the condition of the much-worn ends it appears to have been used as a girdle round the waist. The width of the piece from selvedge to selvedge is one foot ten

[15] Cf. Miss G. L. Bell's very instructive observations in *The Thousand and One Churches*, pp. 428 sqq., together with the works there quoted concerning round temples in Greek and Early Christian architecture.

[16] I cannot refrain from at least a brief reference to the curious analogy which the fact that the circular cellas of the two Mīrān shrines were built to shelter small Stūpas presents to the prevailing character and purpose of the round or octagonal type of the Early Christian and Byzantine church in the Near East. From Miss G. L. Bell's lucid analysis in *The Thousand and One Churches*, pp. 429 sqq., it appears that this type, to which the cruciform one with its central dome is very closely related, was particularly in favour for the Christian martyrium, or memorial chapel. The rotundas built by Constantine and Helena in Jerusalem over the Holy Sepulchre and on the Mount of Olives were its most famous examples, 'and the authority of Constantine marked out the type as one to be accepted and imitated by the Christian world' (*loc. cit.*, p. 430).

In the Near East the round or octagonal plan appears to have been occasionally used also for parish churches. But it is significant that in Europe it was reserved exclusively for baptisteries and martyriums. The close correspondence in purpose between the latter and Buddhist 'memorial shrines', such as we find them in Gandhāra and the Tārīm Basin, is sufficiently obvious. That structures of this type are in Syria, Asia Minor, etc., particularly frequent at spots which had, in all probability, been sacred to pre-Christian cult, is a fact duly noted by Miss Bell (*loc. cit.*, pp. 348 sqq.). It is one to be fully expected by those of us who are familiar with the continuity of local worship as proved at so many sacred sites of India and Central Asia (cf. e.g. my paper in *J.R.A.S.*, 1910, pp. 839 sqq.; *Rājatar.*, transl. Stein, ii. p. 340). The positions occupied by many of 'The Thousand and One Churches' on the Kara-dāgh and by other Christian sanctuaries in Asia Minor are just such as would have recommended themselves to Indian worshippers for their 'Tīrthas', or to Buddhists elsewhere for their sacred spots.

It requires no special demonstration that the circular plan is one structurally most suitable for shrines destined to hold Stūpas, and that the circular 'Buddhist rails' enclosing the earliest Stūpa monuments of India, such as at Barhut and Sānchi, might well have furnished an appropriate prototype for the circular cella such as we find it both in Gandhāra (cf. Foucher, *L'art du Gandhâra*, i. pp. 68, 120 sqq., 134, 142) and at Mīrān. But whether this prototype of undoubtedly ancient Indian origin was the only one, and whether it could have made its influence felt also westwards, is a question in regard to which it would scarcely be safe to propose a definite answer until we know more about the spread of Buddhism into Eastern Īrān and the architectural forms it may have carried with it.

[17] Cf. Strzygowski, *Amida*, pp. 184 sq.

and a half inches, which is some two and a half inches in excess of the standard width of silk for later Han and Chin times, as ascertained above from the specimens of silk found at the Lou-lan Site and at the station T. xv. a of the Tun-huang Limes.[18] The plain-weave texture of the piece, in the present state of our knowledge, does not allow even an approximate determination of its age. But from its general condition and the position in which it was found, well above the floor, I am inclined to conclude that this much-worn 'kamarband' is a relic left behind by some later traveller who may have sought refuge in the structure while its roof was still intact.

Wind-eroded terraces at M. x.

The antiquity of the ruin, apart from the architectural features already discussed, was sufficiently demonstrated by the depth of the wind-erosion around the 'witness' on which it stood (Fig. 132). Deep-cut erosion trenches separated it from three or four other Yārdangs lying close by to the south and east. These evidently marked the original extent of the ground once occupied by a group of buildings. One of these Yārdangs, about 80 feet to the east of M. x, bore the remnant of a structure built of sun-dried bricks and apparently 16 feet square. The bricks were of the same size as at M. x, and the north wall, still clearly traceable, had a thickness of three feet. The wind-eroded trough running close to it with almost vertical banks had its bottom fully 17 feet below the original ground level as marked by the wall.

Soil eroded under gravel surface.

This excessive effect of erosion, clearly seen in Fig. 132, at first caused me surprise, considering that the 'Sai' around had almost everywhere a surface of fine gravel. But a closer examination of the soil laid bare on the slopes of these Yārdangs showed that this surface layer of gravel was very thin, and that the soil beneath was composed of strata of soft alluvial clay, interspersed only at rare intervals with a scant admixture of fine pebbles. The surface layer which had so far formed over the ground from this gravel was not sufficiently thick effectively to protect the soil beneath from deflation. On the contrary, this gravel seemed to act as a corrasive agent, facilitating erosion wherever the configuration of the ground particularly exposed it to being lifted and driven along by the violent north-east winds. The resistance offered by structures occupying exposed positions would create wind eddies and thus intensify the local erosive action of the winds.

Peculiar surface of ground.

The condition of the soil on the surface was very peculiar also in the wide area of tamarisk-covered cones which, as the site-plan, Plate 29, shows, spread away to the north of the ruins so far described. In that area, too, all the ground that was left bare between the thick-set tamarisk-cones was covered with a thin crust of light gravel. But immediately beneath this there came a thick layer of fine dust, apparently disintegrated alluvial clay, into which the feet of man and beast sank deeply. The effect curiously resembled that of moving over treacherous ground where sand is held in suspension by water. Here, about a mile to the north-north-west of M. II, I was shown by Tokhta Ākhūn, my Loplik guide, the last ruin we were then able to trace at the site. It was that of a *P'ao-t'ai*-like tower, M. XII, about 18 feet square at its base, and solidly built of sun-dried bricks measuring 18–19″ × 9–10″ × 4″. The masonry, slanting slightly inwards, still rose to about 12 feet above the ground, which had here suffered scarcely any wind-erosion. The tower must, of course, have been constructed before the maze of sand cones covered with tamarisk scrub grew up around it, and their height, reaching here up to 16 feet or more, sufficed to attest its antiquity. Like a similar tower, discovered in 1914 some two-thirds of a mile further north, it may have served the purpose of a look-out station.

Tower M. XII.

Chronology of site.

It was obvious that on such very deceptive ground as this area of tamarisk jungle other remains might escape attention, and, in fact, when revisiting the site in 1914, I found two more small ruins

[18] See above, pp. 373 sq. with note 13 a. The width of the Mīrān piece agrees with that of the silk used in the painting Ch. 0067 from the cave-temple of the Thousand Buddhas, which was walled up at the beginning of the eleventh century; see below, chap. xxv. sec. ii.

in this belt. But their discovery has in no way modified the general conclusions which the results of my excavations, described above, allow us to draw about the history of the ruined site. They seem to me to prove that all the structures examined, with the single exception of the fort M. I, date from a period approximately corresponding to that to which the ruins of the Lou-lan Site belong, viz. the third and early fourth century A.D., and that they were probably abandoned about the time when occupation ceased at Lou-lan. The remains themselves afford no direct indication of the cause or causes to which the abandonment was due. That the settlement which must have been close to these Buddhist shrines and Stūpas was that of the ancient *Yü-ni*, 'the Old Eastern Town' of Shan-shan, I believe to have made highly probable by the analysis of the Chinese historical records examined in a previous chapter.[19]

Settlement of ancient *Yü-ni.*

No remains of dwellings traced.

These sanctuaries must have already been completely in ruin when the fort M. I was built in the eighth century, probably towards the close of T'ang domination in Eastern Turkestān. To what extent and under what conditions the settlement continued to exist during the intervening period it is impossible to ascertain from the available archaeological data. There are no structural remains which could be assigned to this period. All traces that the dwellings of that time and of the settlement coeval with the Tibetan occupation may have left behind are likely to lie completely buried, either in the riverine belt still capable of irrigation, or in the area which receives subsoil water from the river and is now covered with scrub and tamarisk-cones. There is no indication whatever that the site was permanently occupied after the close of the Tibetan period. Therefore we may safely assume that when Marco Polo passed here more than six centuries ago, it was the same desolate waste which it remained until the small Loplik colony settled down by the Mīrān stream a few years after my first visit.

Section IX. LIST OF ANTIQUES FROM SHRINES OF MĪRĀN

OBJECTS EXCAVATED IN, OR FOUND NEAR, TEMPLE M. II

M. II. a. Pottery fr., hand-made, of well-levigated red clay, and hard fired on an open hearth; both faces dark brown. $1\frac{13}{16}'' \times 1\frac{3}{8}''$.

M. II. b. Pottery fr., as M. II. a., but thicker; inside face dull brown. $2\frac{3}{8}'' \times 1\frac{5}{8}''$.

M. II. c. Pottery fr., hand-made, fired on an open hearth; red clay burning black; outside orn. with indistinct stamped pattern, apparently series of short bars, arranged at various angles to one another. $2\frac{11}{16}'' \times 1\frac{7}{8}''$.

M. II. d–e. Pottery frs., hand-made; dull light red clay, well levigated and hard fired on an open hearth. Gr. M. 2″.

M. II. 001. Arrow-shaft of lacquered reed, as T. XIX. i. 006; remains of feathers and binding; notch at end to fit on string; found in N.E. passage. Length $5\frac{3}{4}''$. Pl. LI.

M. II. 002. a–b. Stucco relief frs. of drapery from colossal and life-size figs.

(*a*) Top of R. thigh and lower part of abdomen; prob. from colossal seated Buddha statue (see M. II. 007); no relief, folds of drapery being rendered by incised lines, single and in groups of three alternately, while the surface follows roughly the forms of the body. Drapery is drawn across the body (cf. *Ancient Khotan*, ii. Pl. LXXXVI, R. xii. 1, but reversed) falling in almost straight folds by R. side and in curves across body, the uppermost being the flattest. Poor work; soft clay plentifully mixed with hair; painted red. 1′ 7″ × 1′.

(*b*) L. shoulder with part of neck and breast, prob. from life-size figure (see M. II. 006); outer drapery rendered by pairs of incised lines; border along neck raised in a pointed ridge with subsidiary inner folds; painted red; at neck, part of inner robe visible, pale yellow, no folds; flesh apparently white. Clay, as (*a*). $10'' \times 9\frac{1}{2}''$.

M. II. 004. Fresco fr., painted pink with line of buff across, and traces of green, buff, and black; colour very soft. $4'' \times 2\frac{5}{8}''$.

M. II. 005. Frs. of coarse hemp string. Gr. length 1′ 9″.

M. II. 006. Stucco relief head, life-size, prob. of Buddha as there are signs of *uṣṇīṣa* (broken off) on top; almost whole of surface scaled off. Features of conventional Buddha type, with smooth forehead and cheeks, large rather prominent eyeballs with eyes almost closed, short sharp-edged nose, and small upturned mouth; ears broken at tips but prob. elongated. Remains only of white slip over face; hair rendered by small snail-shell curls, applied

[19] See above, pp. 326 sqq., 333.

at close intervals to each other, and (with interstices) painted black; material, soft clay plentifully mixed with fibre. Chin to crown $7\frac{1}{2}''$.

M. II. 007. Stucco relief fr.; colossal head of Buddha, back broken off; face perfect from R. ear to outside L. eye, long and narrow, nose prominent and pointed. Eyes prominent, on same plane as brow; mouth small and deeply sunk; hair rendered by tight small spiral curls painted black, as M. II. 006; patches of white surface slip remain; soft clay plentifully mixed with hair. Chin to crown *c.* 1′ 7″. Pl. XLVI.

M. II. 009–0010. Two wooden half-balusters, lathe-turned, to stand against flat surface; three complete and two half ball mouldings separated by pairs of sharp-edged fillets; traces of red paint; tenon at each end; cf. L.B. IV. v. 0026. *009*, 1′ $9\frac{1}{2}'' \times 3\frac{3}{4}''$; *0010*, 1′ $9\frac{1}{4}'' \times 4\frac{1}{4}''$.

M. II. 0011. Mutilated folio and fr. of another from palm-leaf Pōthī, in Sanskrit and Upright Gupta; writing of a rather early Indian Gupta type. The mutilated folio measures about $6\frac{1}{2}'' \times 2''$, with five lines. It is mutilated on L. and at top. There is a string-hole at $4\frac{1}{2}''$ from the right end, which seems to point to there having been two string-holes, in which case the whole length of the folio might have been about 18″. The fr. about $1\frac{1}{2}'' \times \frac{3}{4}''$, shows remains of 2 ll.

The text is apparently grammatical; e. g. *annaśleṣmikaṃ* in l. 4. See below Dr. Hoernle's note, Appendix *F*. Pl. CXLIII.

M. II. 0012. Stucco fr., back of head; face (moulded separately) missing; covered with small spiral appliqué curls painted black; clay unburnt. $3'' \times 2\frac{1}{2}''$.

M. II. 0013. Stucco fr., L. hand of relief fig. holding end of drapery; thumb broken; no colour, but remains of white slip; clay unburnt. $4'' \times 2\frac{1}{2}''$.

FRESCO PANELS AND OTHER REMAINS EXCAVATED IN STUPA CELLA M. III

M. III. i. Fresco panel from 'angel' dado; fragmentary. Fig. inclined to L., head $\frac{3}{4}$ to R. with gaze in same direction, but eyes slightly out of focus, giving dreamy expression; prominence of eyes reinforced in case of R. by a line proceeding from inner angle of eye outwards and downwards in sweeping curve, and emphasizing fullness of lower eyelid. The effect is heightened by grey shading on the lid; this is not found in any of the other 'angels', nor in L. eye of the same fig., which is not so carefully painted; the shading on R. of nose also accentuates the nasal curve.

Robe is of light cochineal pink, outlined black in curve on neck. Wings have only two rays of feathers drawn, but a third is indicated by means of leaving upper edge of wing buff, while the ray of shorter feathers is coloured ochre red; the long feathers appear to have been yellowish buff, with red streak in each case along upper edge.

Above black line at top show feet of standing fig. Lower part and L. end broken away; surface rubbed, but colours on the whole well preserved. 2′ × 1′ 5″. Pl. XLI.

M. III. ii. Fresco panel from 'angel' dado. Fig. inclined somewhat to R. indicating general movement; head $\frac{3}{4}$ to L. and gaze in same direction. Robe rich reddish pink, outlined black in curve on neck; no indication of folds. Wings have three rays; outer, pale buff or white; middle, same but with black line in centre to express quill; inner, buff, with short black lines placed obliquely outward and upward. Face slightly longer in proportion than M. III. i, with heavy impasto on whites of eyes, and eyebrows double-curved, nearly meeting. Expression animated and mouth smiling; lips vermilion with high lights left in undercolour, and just above red a line of high light in heavy impasto; hair in double-leaf form, with stalk-like wisp pointing downwards to R. p. and ringlet starting at temple, depending in front of L. ear.

Feet of figs. in upper fresco seen above black band. Surface gone in patches; otherwise well preserved. 2′ 2″ × 1′ 6″. Pl. XL.

M. III. iii. Fresco panel from 'angel' dado. Fig. has shoulders to front, head $\frac{3}{4}$ to R. lifted well up, and gaze in same direction. Face rather full in contours, with forehead low and round, and black ringlet curling down in front of R. ear nearly as low as end of lobe; eyebrows thick, well arched, and separated; eyes very full and well set; nose Semitic with rather long upward line to end of nostril; mouth of moderate size and slightly smiling.

Robe buff with folds indicated in light red; these fall across breast from the two points of support on shoulders, and straight down from R. shoulder, and encircle upper L. arm. Wings have three rays: outer pinkish buff, middle and inner white; here and there are indications of red lines of first drawing.

At extreme lower R. corner are remains of lines in black parallel to lunette curves; L. foot of standing fig. is visible above top band. Surface much destroyed and cracked. 2′ $1\frac{3}{4}''$ × 1′ $7\frac{1}{2}''$. Pl. XLI.

M. III. iv. Fresco panel from 'angel' dado. Fig. inclined slightly to R., head upright, turned $\frac{3}{4}$ to L. and gaze in same direction. Wings have three rays of feathers: inner and middle, pale yellow; outer, long feathers, light cochineal pink. Robe dark red-brown, outlined in black on neck. Mouth and nose small, and mouth straight; eyebrows well curved, meeting in downward sweep. Pink on cheeks almost effaced; execution bold and precise. 2′ $\frac{1}{2}''$ × 1′ 4″. Pl. XLI.

M. III. v. Fresco panel from 'angel' dado. Fig. inclined to R. with head $\frac{3}{4}$ to L., with gaze slightly down and abstracted expression; contour of face flat from eye to level of mouth, then full and round; eyes too close together and rather carelessly painted, as are also mouth and ear. Robe white, with black outline comparatively high on neck and forming little of a curve. Wings have

two rays of feathers only indicated; outer long feathers, yellowish-buff with red line on upper edge of each feather; inner petal-shaped feathers white or pale buff. Background shows marked traces of pale blue; all work rather careless; well preserved. 2′ 3″ × 1′ 5½″. Pl. XLI.

M. III. viii. Fresco panel from 'angel' dado (second arc of circle). Fig. inclined slightly to L. with head ¾ to R., upward tilt very pronounced. Face contours delicately round; eyebrows moderately arched and well separated; mouth very firm, division between lips being a straight line, the hardness of which is modified by curved red lines of lips and dimples at corners of mouth. Hair partly broken away on top; rippling ringlet in front of ear on L. Robe indicated by plain band of vermilion, extending in downward curve from shoulder to shoulder, and not outlined at its upper edge. Wings have three rays of feathers: outer, long feathers, yellow with upper portion of each feather red; middle, prob. white; inner, white.

Curved outline of lunette and colour from lower part of field effaced; but latter above is pale blue, and border was apparently white with red outlines. Upper L. corner broken away; all work very bold and colours excellently preserved. 1′ 9″ × 1′ 5½″. Pl. XL.

M. III. ix. Fresco panel from 'angel' dado. Fig. strongly inclined to R. and shoulders slightly oblique, R. shoulder being higher than L.; neck directed to R. and head nearly upright, but in general inclination following that of neck. Gaze, directed to L., counterbalances R. inclination of fig., and gives an extraordinarily vivacious character to the whole. Eyes have ingenuous expression, and eyebrows slope upwards towards outer corners.

Robe in light red outline only, showing folds across breast, and down from shoulders. Wings have three rays of feathers; outer, long feathers, orig. vermilion, now mostly lost; middle and inner, white or pale buff. Background blue, mostly lost; traces of red outline to lunette as in M. III. viii. Well preserved generally, but with surface cracks. 2′ × 1′ 5″. Pl. XLI.

M. III. 002. Fresco panel fallen in front of M. III. iv–v. In centre is male fig. probably meant for Gautama, seated ¾ to R. with feet on footstool; throne has black ground orn. with lattice-work of dark green lines with red spots in the lozenges; feet close together, R. pointing directly forward, L. at right angles to it. Lower garment of dark pink drapes hips to ankles; buff stole passes over L. shoulder hanging down to lap, and on R. side behind shoulder to ground, leaving all upper part of body bare. L. arm akimbo with hand resting on thigh; R. hand extended as though teaching; rounded face with small moustache, full, level eyes, aquiline nose, the curve occurring high instead of forming hook near end of nose as in angels; ears were evidently normal.

On lower level to R. is smaller and similar fig. seated ¾ to L., with hands together in adoration; wears high conical turban, white with red rings, coming down on forehead in close-fitting rim from which rise two lunette-shaped upturned flaps. Opposite on L. edge of fr. appears L. knee and arm of third seated fig., the hand upraised, thumb, first and fourth fingers extended, two middle fingers flexed in palm; garment over knees bright pink.

Background to upper part of middle fig. pale green, prob. back of throne; to R. fig. vermilion; in foreground is representation of two tanks (?) of vertical and horizontal rail-like construction in light blue, outlined with darker blue; ground running between tanks, vermilion.

Flesh painted flesh pink, coarsely shaded with bright rose pink, and with pink cheeks to both figs.; contour lines of flesh and of buff drapery a brownish Indian red; other outlines black; hair, moustache, eyebrows, lower line of eyelid, outline of iris, and pupil black; iris brown. General character Western, showing late Hellenistic influence. Colours well preserved. 2′ 9¾″ × 1′ 11″. Pl. XLIII.

M. III. 003. Fresco panel (incomplete) fallen in front of M. III. iv–v. On L. is upper half of a Buddha, ¾ to L., R. hand raised as in *abhaya-mudrā* but with thumb bent inwards touching second joint of third finger (eighth on hand). Dr. Venis suggests that this may symbolize Buddha expounding 'the eight-fold way' or the eight Pāramitas. L. hand low, prob. gathering up drapery. Behind him are six disciples, in two rows of three, one above the other; the nearest to him in upper row holding a yak-tail fan in raised R. hand; to R. again of disciples appears naked R. arm which grasps handful of white buds or flowers, apparently in act of throwing. As background to arm appears part of dark conical (?) mass of black, covered with red and white flowers and poppy-like leaves in greenish grey; and on extreme L. is similar mass of black on which are scattered well-drawn leaves in greyish blue; both are intended to represent trees (cf. Figs. 136–8). Background elsewhere vermilion, turning to pale buff between Buddha and disciples (paint probably lost); along top runs black band.

Buddha wears dark purple-brown robe, covering both shoulders; outlined black and lined with buff, which shows at turnover on L. shoulder. Head of Western, slightly Semitic type, with high straight forehead and somewhat domed top; large well-opened straight-set eyes, partially covered by eyelids; nose aquiline; short upper lip; small curved mouth; softly rounded cheeks and chin; ears are elongated and pierced, and there is small moustache and rippling lock before ear; eyebrows nearly meet over nose; L. strongly arched; hair in curves along forehead, receding at temples; *uṣṇīṣa* partly lost; all hair black.

Flesh pale buff, flat on face, but with grey shading on arm; contour lines rapidly drawn with broad brush in light red, and emphasized with lines of reddish-brown wherever a true outline is in question or strong outline of feature is required; elsewhere (along sides of nose, line of jaw against neck and of forehead under hair, round ball of chin and for wrinkles in neck) the light red only is used, giving effect of rough shading but producing required effect at a slight distance. Eyes look slightly downwards under eyelid, and are painted like those of 'angels' with white on eyeballs, brown on irises, and black

for pupils and iris outline; behind head is circular halo of light buff bordered with red.

The disciples are of a strongly Western type, with decidedly hooked noses and fuller and more prominent eyes. Their heads are of a shorter and rounder type, and the method of painting is different from that of the Buddha but akin to that employed in the faces of M. III. 002 and of the 'angels' in the dado; the colouring, however, is much stronger and cruder than that of the latter. All heads are shaven and are seen $\frac{3}{4}$ to L.; fig. on L. in top row carries white *caurī* in R. hand uplifted behind Buddha, and wears bright green robe lined with white, leaving R. shoulder bare; next wears bright red robe lined with white, covering both shoulders; fig. on L. in lower row, light buff robe with folds indicated in red (R. shoulder broken off); and fig. at other end of row dark red robe covering both shoulders; a hand of the latter appears at edge of fr. from inside of breast of robe, fingers clasping edge; this fig. also has two transverse wrinkles in forehead and heavy double-curved eyebrows meeting over nose; ears are all pierced. The monotony of the heads is diversified by the difference of their gaze, some looking to their R., others straight before them, another more directly towards spectator and up under eyelids.

The flesh itself is painted in clear salmon or flesh pink, shaded with warm grey, and with high pink blush upon each cheek; all outlines are red-brown, and the shaven portions of the flesh are also represented in grey; the lips are vermilion; their treatment and colouring, like that of the eyes, being similar to that of the 'angels', M. III. i–v, etc.; cf. also M. III. 008. The white impasto of the eyes is particularly thick, catching real high lights.

The painting is of the same firm bold style as that of the dado, evidencing well-developed methods of producing a finished effect with economy of work. Colouring very fresh and surface well preserved. 3′ 3½″ × 1′ 10½″. Pl. XLII.

M. III. 004. Fresco fr. fallen in front of M. III. v, showing legs from hip to ankle of fig. walking to R., against black background; part of red-brown robe gathered well up thighs, and loop of buff stole to R.; contour lines reddish brown; flesh, light pink shaded with warm grey and bright pink. Towards edge, beyond R. ankle, part of broad red vertical band. Colours well preserved. Plaster backing, coarse and mixed with straw. 1′ 1″ × 1′ 2½″. See Fig. 127.

M. III. 005. Fresco fr. fallen in front of M. III. v–vi; shows portions of three heads of disciples (fourth lost in removal), looking $\frac{3}{4}$ to L.; treatment as M. III. 003; background vermilion and white; colours well preserved. 11″ × 9″. Pl. XLIV.

M. III. 006. Fresco fr. fallen in front of M. III. v–vi; shows head, $\frac{3}{4}$ to R., of same type as princely disciple in M. III. 002; conical turban nearly all missing; eye very full, the white painted with most effective impasto. Colour well preserved. 2¾″ × 3″. Pl. XLV.

M III. 007. Fresco fr. in five pieces (now joined), fallen in front of M. III. v; shows festoon of large overlapping rosettes in red and white on dark grey-black ground; centres of flowers white, with red radiations on yellow ground indicating stamens; portion of background covered with white wavy lines, indicating clouds. Colours well preserved. 1′ 3″ × 1′.

M. III. 008. Fresco fr. showing head $\frac{3}{4}$ to R., of Western type, with black hair, beard, and moustache; eyes almond-shaped, level, full; nose hooked towards end; mouth straight and narrow; mark on upper lip; background to R. vermilion and black.

Drawing rather careless, but painting rapid, direct, and very good, the method being that employed for disciples in M. III. 003, but specially clearly revealed in this piece. The flesh colour was first laid on, then pink on cheeks, side of nose, about mouth, under eyebrows, etc.; this was followed by the grey shadows, and a pearly blue grey in the eyes; the contour lines of face and features were then applied in dark red-brown, which gave the exact drawing. This red-brown appears also under the black of eyebrows, moustache, etc., and for iris of eye; the black was then put in, and the red lips, and finally the high lights in white. The whole evidences a well-established system in constant use, and in decadence rather than development. Colours perfectly preserved. 4⅜″ × 3″. Pl. XLV.

M. III. 009–0010. Fresco fr. fallen in front of M. III. v, showing shoulders and part of head of fig.; shoulders front, head slightly to L. R. cheek, chin, mouth, and point of nose preserved, also end of L. ear. Flesh, a delicate pink touched with brighter pink, and with contour lines in Indian red; lips, vermilion treated as in M. III. ii; high lights on sides of cheek, end of nose, above lips, and on chin, in white. End of straggling lock hangs in front of L. ear; face similar to M. III. 0033 in type.

Garments are somewhat unusual; under-robe is green, draped across front, with folds in dark grey, and finishing in straight white band across hollow of neck. A narrow white stole hangs over shoulders straight down on green vest, ending at breast level on fig.'s R. side; outside stole and also covering shoulders is band of rich pink, which also ends about breast level on R. p. Beneath these ends appears dull grey garment, possibly part of green tunic discoloured; placed loosely round neck under stole is cord with end hanging down centre of breast.

In ear is yellow ear-ring consisting of bunch of three balls on ring, and white drapery hangs down by side of face. At lower edge of fr. are flowers, prob. carried in hands held in front of fig.

On R. is portion of face of second fig. with mass of black hair or drapery hanging by side, and R. eye almost complete. All outlines except of shoulder are red; background yellow ochre; colours fresh; painting very good, and well preserved. 10¼″ × 1′ 8¼″. Pl. XLV.

M. III. 0011. Fresco fr. fallen in front of M. III. iv, showing half of face, $\frac{3}{4}$ to L.; general type recalling Buddha in

M. III. 003. Flesh light buff, flat, with hard shading in light red at ear and jaw, and chin indicated by red circle; hair and finishing touches in black; eyebrow has double curve, low at nose, high and strongly curved at outer end; L. ear slightly elongated and pierced. Whole R. side of face gone; background light buff; drawing rather poor; fairly preserved. $6\frac{1}{2}'' \times 5\frac{1}{2}''$.

M. III. 0012. Bundle of fabric frs., woollen and cotton, including three pieces of buff backing with frs. of painted stucco (buff and black) adhering to them, and three small frs. of salmon red. (Analysed by Dr. T. F. Hanausek.) Largest fr. $8'' \times 5''$.

M. III. 0013. Ten artificial flowers; from cloth model of lake, M. III. 0026. Flower-cup, of six to ten petals, is cut out flat in one piece from pale red, buff, or blue, cotton or silk fabric; through middle is passed wooden peg, with pointed end, which serves as stalk; to head of peg, tuft of buff thread to represent stamens, etc., is tied with red, blue, or buff thread. (Fabric analysed by Dr. T. F. Hanausek.) Length of peg $2\frac{1}{4}''$, diam. of flower $2''$ to $3''$.

M. III. 0014. Fresco fr. fallen in front of M. III. ix, showing lower folds of robe and part of leg and foot of striding fig. as in M. III. 0036; flesh treatment as in M. III. 004; robe pale yellow outlined red; background black orn. with green leaves and red rosettes within green circles (as M. III. 0058); colours well preserved. $6'' \times 5''$.

M. III. 0015. Piece of striped silk, inscr. with one l. of Khar. chars. Preserved in one piece (except for two small detached frs., blank, from L. bottom corner), but broken all round edges and large portions lost. Silk buff, fine texture, plain weave, with two woven bands of narrow closely-spaced lines, alternately dark red and green, running its whole length. Width of each band $2\frac{3}{4}''$, intervening space $2\frac{1}{4}''$. Along middle of latter runs a red line, and along this nine short Khar. inscriptions, five of which are complete. They contain prayers in Prākrit for welfare of pious donors, etc. See Boyer, *Inscriptions de Miran*, *Journal Asiat.*, 1911, xvii, pp. 418 ff.; above, p. 495. Gr. length 4′, gr. width *c.* 1′ 1″. Pl. XXXIX.

M. III. 0016. Fresco fr. fallen in front of M. III. iv, showing lower part of standing fig. in black under-robe to middle of lower leg; buff upper robe with rich red border draped from above downward to R. R. foot visible, but toes partially obscured by L. foot of another fig. on L., and L. foot completely hidden by R. foot of third fig. to R. Background red ochre, nearly perished; flesh of centre and R. fig. pink; that of L. fig. yellowish buff. Traces of bright red outlines, prob. of orig. sketch; final outlines Indian red; traces of bright yellow just below robe to R. All upper part missing; fairly preserved. $1' 1\frac{1}{2}'' \times 9''$.

M. III. 0017. Fresco fr. from N.E. passage; portion of group of three figs., seated. Robes gathered about legs and stoles on shoulders; hands together in adoration or submission. Figs. turned $\frac{3}{4}$ to L., knees wide apart; feet, heads, and upper part of bodies missing. Flesh light, tinted with bright pink, and shaded with grey; arms and front of bodies bare; fig. to L. wears red-brown lower robe and bright red stole; middle fig. light green robe and white stole; fig. on R. pale yellow robe, stole not visible.

Drapery in each case shaded with suitable colour; red, with black lines; green, with dark grey; white, with pale grey; yellow, with red. In the case of the white and the green, the folds are represented as shades rather than lines; flesh contours red-brown. Background, visible between legs of green and yellow persons, rich red; well preserved. $8\frac{1}{2}'' \times 8''$.

M. III. 0018. Fresco fr. from N.E. passage, showing R. foot of human fig. Pose suggests that fig. to which foot belongs is turned $\frac{3}{4}$ to L., throwing weight of body on to L. foot, R. foot being held momentarily turned in opposite direction with heel lifted and toes only steadying pose. Though rapidly done, drawing is as a whole good; flesh pink, outline Indian red; ground on which toes rest, white, with pale grey below and black below that again. Background black, with small patch of vermilion at upper part, prob. edge of robe; well preserved. $4\frac{1}{2}'' \times 4''$. Pl. XLIV.

M. III. 0019. Fresco fr. fallen in front of M. III. v–vi, showing upper part of two figs., evidently female, with hands placed together in attitude of adoration or respect. The two heads almost touch and are turned $\frac{3}{4}$ to R.; faces are fair with pink cheeks and are painted in very distinct chiaroscuro, the shades being pearly-grey. Eyes almond-shaped, straight, and rather too near together; animated expression, slightly mirthful; mouth in each case longer than usual, and that on L. distinctly smiling; lips are solid red and of moderate thickness; necks strongly wrinkled, transversely, to express plumpness; noses inclined to be aquiline. Hair black and long, hangs in tresses at back of ears, and wavy black ringlet in front of each ear. On forehead of R. fig., hair is parted in middle, and carried in wavy line R. and L., with small point at each side over eyebrows recurved towards centre. Eyebrows well separated, and ears normal or very slightly elongated. White bands crowning hair, somewhat like Brittany girl's cap.

Head of L. fig. broken away above bridge of nose, but on each side of face are rich pink pendant bands, perhaps part of cap; robe of this fig. yellow outlined in red, with V-shaped opening at neck, sleeves to wrist, and dark red orn., prob. flower, on shoulder. Robe of R. fig. similar but light green, outlined dark grey. Background vermilion; well preserved. $8\frac{1}{2}'' \times 8''$. Pl. XLIV.

M. III. 0020. Fresco fr. from N.E. passage, showing dull pink drapery outlined black; loose ends of robe falling down centre of fig. between striding legs. Background rich pink; coarse work. $4\frac{1}{2}'' \times 5\frac{1}{4}''$.

M. III. 0021. Carved wooden capital (half of), round; upper half occupied by two plain mouldings, lower by a row of broad upward-pointing petals; below this, a

projecting neck, which must have been hidden by flange round top of pillar; capital hollowed to take tenon at top of pillar. Traces of dark paint; for somewhat similar Coptic example, see Quibell, *Saqqara*, 1909, Pl. XXVIII. 5–6. $3\frac{1}{4}'' \times 4\frac{3}{4}''$ to $4''$. Pl. XLVII.

M. III. 0024. Cylindrical wooden block, roughly hollowed, outside cut to a waist, hour-glass fashion, with straight ends. At $\frac{3}{4}''$ from either end a row of holes $\frac{3}{4}''$ sq. pierced to hollow centre; eight holes at each end, set alternately; in one, remains of sq. wooden peg projecting outside; no sign of wear; traces of stucco covering and paint; resembles hub of wheel (for revolving axle), but spokes very weak for such purpose; traces of colour. About $\frac{1}{3}$ of whole preserved; good condition; length $8\frac{3}{8}''$, diam. at ends $4\frac{3}{4}''$. Pl. XLVII.

M. III. 0025. a–c. Three frs. of coarse buff cotton cloth ground for artificial flowers (M. III. 0013): (*a*) shows traces of black paint put on in lines; (*b*) has traces of dark blue and white paint and one fr. of gold leaf; (*c*) shows plentiful traces of green; holes for flowers about $2''$ apart. (Fabric analysed by Dr. T. F. Hanausek.) Gr. M. $11''$.

M. III. 0026. Remains of coarse cotton cloth, covered with a very thin coat of white plaster painted dark blue. On to the wet plaster were fixed groups and sprays of artificial leaves cut separately out of red or blue cloth and stuck together with paste; artificial flowers on sticks (as M. III. 0013) were stuck upright into cloth and plaster background. Whole prob. meant to represent the sacred lake, Sukhāvatī, with floating lotuses and water-plants. Another and finer cotton fabric also occurs as a background to the same flowers; it has no plaster facing, but was painted with colours now faded, and was folded in three or four thicknesses. (Fabric analysed by Dr. T. F. Hanausek.) Largest fr. *c.* $1'\ 3'' \times 1'$. Pl. XLVIII.

M. III. 0027. Artificial flower-cup, as M. III. 0013, of fine pale-buff silk, with larger piece of same silk from which flowers were evidently cut; silk clean but much split. Diam. of flower $2\frac{1}{4}''$, silk $1' \times 4''$.

M. III. 0028. Fr. of thick buff corded silk, evidently from piece adorned with flowers as M. III. 0026; traces of black paint, and six peg-holes placed at regular intervals. $5\frac{7}{8}'' \times 4\frac{1}{4}''$. Pl. XLVIII.

M. III. 0030. Fresco fr. from N.E. passage, showing part of face $\frac{3}{4}$ to L.; very roughly painted, but strong; same type and treatment as M. III. 0011. Flesh greyish buff; outlines Indian red over broad rapid lines of light red; no shading; chin indicated by circle of red; black moustache and eyebrows joined. $4'' \times 4''$. Pl. XLIV.

M. III. 0031. Fresco fr. representing head of royal personage $\frac{3}{4}$ to R.; same type and treatment as in M. III. 002, but less carefully painted. Background vermilion, with buff architectural (?) details lined with red; stole white; colours well preserved. $6\frac{1}{2}'' \times 6''$. Pl. XLIV.

M. III. 0032. Fresco fr. showing head of royal personage $\frac{3}{4}$ to L., on pale yellow ground. Same type, treatment, and head-dress as in M. III. 002, but painting more delicate. Part of L. hand on chin level, in pose of adoration; small patches of vermilion stole at shoulders; above appear toes of an elephant in pink. Colour well preserved but surface scored. $8\frac{1}{2}'' \times 6\frac{1}{2}''$. Pl. XLIV.

M. III. 0033. Fresco fr. showing middle part of face, nearly life-size, $\frac{3}{4}$ to L.; white drapery behind outline of cheek; flesh pink, shaded with richer pink and with high lights in white. General type and treatment as in M. III. 009–0010, showing great skill; background ochre yellow. $3\frac{1}{2}'' \times 3\frac{1}{4}''$. Pl. XLV.

M. III. 0034. Fresco fr. showing portion of face, $\frac{3}{4}$ to R.; from chin to lower part of L. eye only. Similar in type and treatment to M. III. 0033; by R. edge are two parallel curved black lines, prob. part of halo of another fig. $3\frac{1}{4}'' \times 3\frac{1}{8}''$. Pl. XLV.

M. III. 0035. Fresco fr. showing portion of L. hand and drapery, life-size. Flesh shaded pink, duller on back of hand; nails cut very short, tips of fingers rather recurved. On first joint of index finger is ring with elliptical bezel; high lights on fingers and nails boldly painted in white. In hand is held bunch of flowers (?) painted on red ground; drapery buff, with red contours. Very good work and well preserved. $7\frac{1}{2}'' \times 4\frac{1}{4}''$. Pl. XLV.

M. III. 0036. Fresco fr. showing, on vermilion ground, feet and lower part of legs and loose drapery of striding fig.; prob. front view. Legs pink, shaded grey, outlined red-brown; feet turned in profile in opposite directions, outward, striding to R.; loose drapery hangs in classic folds, roughly contoured and shaded in red on yellow. To L. appears L. foot and leg of second fig. in similar pose, but with light green drapery. White and grey band forms ground line marking bottom of frieze; workmanship rough. $1'\ 3\frac{1}{2}'' \times 8''$. Pl. XLV.

M. III. 0037. Fresco fr. showing upper part of face of royal personage, $\frac{3}{4}$ to L., similar to smaller fig. of M. III. 002; part of flap (green) of turban and R. ear of a second fig. to R. Ground strong vermilion; all colours very bright and fresh; good work. $6'' \times 4\frac{1}{2}''$.

M. III. 0038. Fresco fr. showing lower part of face and L. shoulder; treatment similar to M. III. 002. Black moustache painted over preliminary red-brown; drapery over shoulder, dull plum colour with black contours; background brilliant vermilion; high light on end of nose, white. Colours very fresh, good work. $3\frac{1}{8}'' \times 2\frac{5}{8}''$.

M. III. 0039. Fresco fr. showing part of L. cheek and eye, nearly life size, of human fig. looking to L.; flesh pink shaded grey; treatment of eye similar to that in M. III. 'angel' dado. Very good work. $2\frac{1}{4}'' \times 2''$.

M. III. 0040. Fresco fr. showing chin and neck of human fig.; prob. part of M. III. 0039. Flesh pink shaded grey;

strongly cleft chin; drapery yellow bordered white; crimson over-robe, vermilion background. Good work. $3\frac{3}{4}'' \times 3\frac{3}{8}''$.

M. III. 0041. Fresco fr. showing portion of fig. (?), draped; perhaps breast of flying female. Drapery light pink, background light green, flesh (?) nearly white. $3'' \times 2\frac{3}{4}$.

M. III. 0042. Fresco fr. showing portion of background. Two broad bands, one red, the other yellow ochre, at right angles to each other; in the angle a rough red, green, and black scroll enrichment. $4'' \times 3\frac{3}{4}''$.

M. III. 0044. Fresco fr.; on R. appears R. side of seated or kneeling fig. wearing light green stole and crimson lower robe. Flesh light buff, shaded pink and grey; R. arm crossed on breast, hand broken away; prob. in attitude of supplication. Background dull purple with black tufts at intervals; this may be part of a camel, cf. M. III. 0055; to extreme L. portion of buff drapery. Work somewhat rough but effective. $7\frac{1}{2}'' \times 8\frac{1}{4}''$.

M. III. 0045. Fresco fr. fallen in front of M. III. v–vi; showing feet and ankles of standing fig. turned slightly to L. R. foot in profile, L. foot directed forward, the toes very clumsily drawn; flesh pink; lower part of green robe visible; on extreme R. remains of feet of fig. similarly posed, having vermilion robe. Ground vermilion, bordered above feet with white, and with blue-black background above; work rough. $7'' \times 6\frac{3}{4}''$.

M. III. 0046. Fresco fr. showing lower part of standing fig. turned slightly to R. Yellow lower robe in classic folds contoured red; purple upper robe contoured black; L. foot foreshortened $\frac{3}{4}$ to L. p.; R. foot (broken away) pointing back to R. p.; flesh pink roughly shaded with grey. Background buff; very rough work. $7\frac{1}{4}'' \times 6\frac{1}{2}''$.

M. III. 0047. Fresco fr. showing middle portion of standing fig. in yellow robe lined with red, and green stole. Rough work. $4\frac{1}{4}'' \times 3\frac{1}{4}''$.

M. III. 0048. a–b. Two fresco frs. showing portion of border. On a black band upon red background are lily-like forms painted in white; very bold. (*a*) $4\frac{1}{2}'' \times 3''$; (*b*) $3\frac{1}{8}'' \times 3\frac{1}{4}''$.

M. III. 0049. Fresco fr. fallen in front of M. III. iv. Near centre is lower part of tree trunk, buff; to R. is human R. foot pointed towards tree; to L. toes of another foot (L.) also turned towards it; flesh pinkish buff, shaded grey, and outlined dull red. Background vermilion with narrow band of buff below; work rather rough. $1'\ 4\frac{1}{2}'' \times 3\frac{1}{2}''$.

M. III. 0050. Fresco fr. from N.E. passage, showing band of dark salmon pink, with black line on each side; beyond is portion of grey-green background and bright crimson robe (?). $5\frac{1}{2}'' \times 3\frac{1}{2}''$.

M. III. 0051. Fresco fr. from N.E. passage, showing part of toes (?) of human foot nearly life size. Flesh pink, shaded with warm grey and bright pink, and outlined reddish-brown. Ground pale blue-grey; much rubbed. $2\frac{1}{2}'' \times 3''$.

M. III. 0052. Fresco fr. from N.E. passage, showing part of L. brow and head-dress of human fig., nearly life size. Flesh pink, shaded and generally treated as in M. III. 002; head-dress appears to be white turban such as Afrīdīs wear, with band of grey with red splashes encircling its lowest edge. $4\frac{3}{4}'' \times 3\frac{1}{2}''$.

M. III. 0053. Fresco fr. from N.E. passage, partly burnt; shows a few red lines, prob. of drapery. $3\frac{1}{2}'' \times 1\frac{3}{4}''$.

M. III. 0054. Fresco fr. from N.E. passage, showing piece of decorated background. On blue-black ground are red and green circular patches outlined with white, and white device, possibly a written char. ꟸ. Beyond is piece of white band on which are red marks; whole too fragmentary to be intelligible. $2'' \times 2''$.

M. III. 0055. Fresco. fr. from N.E. (?) passage, showing an animal (camel ?) lying down. Outline black over light brown; general colour buff shaded with pink, with a few black dashes prob. intended to indicate fur. Head, line of back, and quarters missing; background black. $1'\ \frac{1}{2}'' \times 5\frac{1}{2}''$.

M. III. 0056. Fresco fr. much broken, showing head and shoulders of royal personage, $\frac{3}{4}$ to L., similar to smaller fig. of M. III. 002; behind, second fig. of same type; background vermilion. Much abraded; good work. $9'' \times 5\frac{1}{2}''$.

M. III. 0057. Fresco fr. from N.E. passage, showing two figs. seated or half kneeling, with hands together in supplication; upper part missing, and most of fig. to R. Fig. to L. wears light green lower robe and crimson stole; otherwise nude; other has pale buff drapery; flesh very pink. Background where visible, blue-black; ground red with white upper border; much abraded. $9'' \times 7\frac{1}{4}''$.

M. III. 0058. Fresco fr. from N.E. passage showing architectural details of background. In centre is panelled pilaster, with capital; panel black, with three large outline circles in dark green, full width of panel, placed one over the other; in each circle is six-petalled crimson rosette. Border at top and on L. side is white with scale imbrications in green and red; border on R. side, red; outside the red is black, and then red as a general background; capital, apparently bell-shaped, yellow. To L. of pilaster, and in a more distant plane, is straight-linteled arch carried on cubical impost supported by bell-shaped capital and pillar, all yellow; above lintel a decoration of imbrications; and through archway, a bright green distance; all outlines red. Cp. above, p. 506. $8'' \times 5''$.

M. III. 0059. Fresco fr. from N.E. passage, showing part of garland of overlapping rosettes as M. III. 007. Outer half of petals green, inner white, centres yellow with red stamens; outlines black on green and black ground. $6\frac{1}{2}'' \times 5\frac{1}{2}''$.

M. III. 0060. Fresco fr. from N.E. passage, having slightly concave surface; shows part of garland of overlapping rosettes as M. III. 007, 0059; outer half of petals

pink, inner white, centres yellow, with red stamens; outlines black. Roughly executed. 7″ × 3½″.

M. III. 0061. Fresco fr. from N.E. passage, showing portion of decorative detail. On black lunette with broad red outer edge is device in white consisting of three-petalled flower (palmette) from which proceed, R. and L., thin stems linking up prob. with similar flowers (missing). Outside lunette, part of festoon of purple berries, etc., on buff ground. Rough but effective work. 4¼″ × 5″.

M. III. 0062. Fresco fr. from N.E. passage; on dark buff ground wavy black lines indicating long curling hair; prob. part of neck of camel, or mane of lion. Green ground to one side; rough work. 6″ × 3½″.

M. III. 0063. Fresco fr., showing portion of turban with upturned flaps, akin to that of smaller fig. in M. III. 002, but more closely resembling that of head in dado M. v. (Fig. 137). Most carefully drawn, and from a life-size fig.; the centre top-knot is black, with white roll encircling it from which radiates a flower-like arrangement of drapery (?). 4″ × 4¾″.

M. III. 0064. Four strips of red silk, fine plain weave, with plentiful remains of stucco adhering to back; once evidently pasted along some band of stucco (prob. on base of a pedestal), edge being turned over above and below as shown by folds. Silk still stiff with paste; one strip shows angle where silk turned corner; dark blue paint along edge of two smaller frs. Length of strips 2′ 4″; 2′ 2″; 1′ 5″; 5″; width of two longest 3⅛″.

M. III. 0065. Strips of red silk, finely corded, evidently pasted on base of statue or similar object; remains of stucco on back, and of black paint in bands on front; larger frs. stiff. Gr. length 1′ 1″.

FRESCO FRAGMENTS AND OTHER REMAINS FROM SHRINE M. v

M. v. vi. Fresco fr. from dado with festoon (Fig. 140), showing a youthful male head, ¾ to R., part of portrait seen in Fig. 140 rising from hollow of festoon. The head is short and square, with a broad low forehead, flat skull, and square jaws; the ears are normal, the eyes large and straight-set with well-arched brows; the nose slightly hooked towards the end like those of the M. III 'angels'. But the line has rubbed off at the point, giving the nose at first sight the misleading appearance of a snub; the hair is black and close-cropped, coming down in front of the ear on each side. The treatment of the flesh is the same as in the 'angels' of M. III, but the work not quite so animated; e.g. the lips are solid red without high lights. The general type distinctly Western.

On R. side of neck is a trace of pale green drapery; on extreme R. is part of the sweeping band of the festoon, much effaced; and on extreme L. part of an *amorino's* hand and the ribbon binding the opposite curve of the festoon; dark blue band along the top. The background is pale buff, with a rosette on either side of the head in the space between it and the festoon; that on L. is pink, six-petalled, with sepals showing between the petal tips; that on R. seven-petalled, green, with similar sepals. Both have buff centres, circular, with red rings representing stamens or seeds. Both are rosettes of a conventional type common in late classical art.

Surface rubbed and cracked, and edges broken except along the top where it has been cut. 1′ 8″ × 1′ 2″. Pl. XLIV.

M. v. x. Fresco fr. from dado with festoon (cf. Figs. 134–40), showing head and shoulders of youth supporting the festoon and wearing a Phrygian cap. The festoon is shown in its upward curve, forming a black background to the head and descending over the shoulders on either side; two of the ribbons which bind it at intervals are shown to R. and L., and the fingers of the youth's L. hand are seen clasping its outer edge, his arm passing behind. His R. hand holds a bowl against his breast; his head and eyes are turned ¾ to L.; the face delicate-featured with very large straight-set eyes and small mouth and nose; the outline a refined oval. The treatment of the flesh is like that of the M. III 'angels'. Black hair shown in a narrow fringe across forehead and down towards ear, which is hidden by the side-flaps of headgear.

Band forming the festoon is black, with a bunch of three fruits in red on R. and L.; the ribbons are greenish buff. The fig. wears a red garment (traces only of the colour remain), and the cap is of whitish buff. The background above the festoon is of same buff, with fr. of green rosette on extreme R.; upper edge of frieze is bounded by a broad band of dark blue.

Clay brittle with little straw in it; the painting much damaged and cracked. 1′ 6″ × 1′ 6″. Pl. XLIV.

M. v. 001. Wooden capital and shaft, part of, from N.E. passage. Relievo decoration shows acanthus of Gandhāra type; a single leaf, with veins springing upwards and outwards, fills front of capital; in middle of this is stem reaching from neck to abacus and carrying a four-petalled flower placed in centre of abacus; stems form the angles of capital and at their upper ends roll over into small coupled volutes; sides have half acanthus leaves. Traces of red paint on background; portions of twelve-sided shaft below capital cut in same piece. Wood much split. Width 5⅛″, h. of capital 4⅜″, thickness 3½″. Pl. XXXIV.

M. v. 002. Fabric frs.; one of close-woven thick yellow corded silk, and one of fine dark greenish-blue corded silk. Remainder of thin pinkish-buff silk, exceedingly brittle. Gr. M. 4″.

M. v. 003. Fr. from angle of small wooden capital, similar to but not identical with M. v. 001. Upper part, with piece of abacus, shows double volute at angle with remains of scarlet paint, and acanthus with remains of green. Wood soft. Length 2 7/16″, width 1⅛″.

M. v. 004. Fresco panel from outer S. passage; for original position see Fig. 133. Shows head and shoulders of winged fig. rising from lunette, akin to 'angels' of M. III, but of inferior workmanship both in technique and drawing. Fig. is seen from front with shoulders inclined to L. and head upright, $\frac{3}{4}$ to R., and eyes turned as far as possible in same direction; head is of squarer and shorter type than M. III 'angels', more resembling head of M. v. vi, but with rounder jaw. Flesh is painted flat white, devoid of the delicate tinting of cheeks and transparent shading so characteristic of the M. III series; all contour lines are black, and eyes are solid black; red only on lips. Hair is black, curly on forehead and carried all over head and down sides of face; the leaf-like tuft of the M. III examples still shows itself, but only as a slightly higher mass in the general black wig. The wings are thinner and not so well shaped; outer long feathers are white, with indications of yellow in the shorter ones; middle ray has each feather longitudinally half black and half white; inner ray has plain band of yellow. Robe is yellow, with light red lines forming band round neck and indicating folds across breast and over arm.

The lunette is flatter and more extended, its field a bright pinkish red; above, it is bordered by a 3" band of pale blue over white (both colours almost entirely effaced), and above again by a 3" border of bluish black; the lower curved edge is bordered by a 7" wide festoon in black with bold and coarse cloud scroll effectively painted in red outlined with white. A detached fr. in L. corner shows that background beneath this was yellow with wave lines in red and black. The whole is wanting in delicacy and vitality. Fr. well preserved but considerably broken away at ends. 2' 3" × 1' 9". Pl. XLV.

M. v. 005. Fresco fr. from outer S. passage, showing portions of wings of angel similar in all respects to M. v. 004, excepting that some of the white long feathers are tinted, as to half their breadth, with pale grey; colours well preserved. 1' $\frac{1}{4}$" × 7".

M. v. 006. Lotus carved in wood from top of S.E. passage. Eight petals curved outwards and downwards from centre; traces of gilding on two petals and loose pieces of gold-foil found with lotus; between points of petals are sepals painted red, as are also petal edges. Stamens form basin-like cavity, in centre of which is solid knob with iron tang projecting. Well preserved, but slightly insect-eaten. Diam. 4$\frac{5}{8}$", h. 1$\frac{5}{8}$". Pl. XLVII.

M. v. 007. Oblong wooden block, pierced with eight holes arranged in a circle with a ninth at centre. On one side dark paint in centre and, outside ring of holes, traces of stucco and blue paint; on this side holes show marks of wedges used to keep upright objects fixed in; perhaps a stand for votive incense-sticks. Stucco prob. took the form of a wreath, from centre of which the sticks rose; the holes are pierced with a bar of red-hot metal, not properly drilled. 5$\frac{3}{4}$" × 4" × 1$\frac{1}{8}$".

M. v. 008. Wooden relief rosette, part of, from N.E.; would have twelve petals when complete; part of four petals and four sepals remain, curving downwards; petals show traces of blue and pink paint, sepals of bright red paint, on white slip. 9" × 2$\frac{3}{4}$".

M. v. 009–0010. Pair of wooden discs, lotus-shaped, with bevelled edges, from S.W. passage. Upper surface is cut concave, leaving small flat disc in centre; actual centre pierced by iron tang. Forms rough lotus-flower; central disc green bordered with red, concave surface green; on bevelled edge eight green petals outlined in red with red sepals. 4$\frac{1}{2}$" to 3" × 1$\frac{1}{2}$".

M. v. 0011. Fr. of painted wooden panel from gate. Paint mostly gone; design unintelligible; black and red on white ground. 1' 2$\frac{1}{2}$" × 4$\frac{1}{2}$" × 1".

M. v. 0012. Carved wooden lintel, end of. Oblong block with plain frame round three sides, enclosing sunk space, towards inner (L.) end of which is carved lotus-like flower; this has ten petals, and inside many stamens in cup-like form round pistil. Inside frame at complete end is plain moulding, which is interrupted by the flower and continues beyond it in a plant motif, apparently a highly conventional wreath. Cut off at this (R.) end. Very rotten. 1' 5" × 1' $\frac{1}{2}$" × 4". Pl. XLVII.

M. v. 0013. Fresco fr. showing portion of male head $\frac{3}{4}$ to L. General type as in M. III. 002, etc. but no head-dress; short black hair; moustache and straight lock carried down in front of L. ear. No shading on face, which is darker pink than in the case of 'royal personages'; lips in bright vermilion, outlined only. Background blue-black; above head, portion of hand holding *caurī*. Well preserved. 4$\frac{1}{4}$" × 5$\frac{1}{4}$". Pl. XLIV.

M. v. 0014. Fresco fr. showing pair of life-sized hands joined in supplication. Pink shaded grey, outlined reddish brown; short nails; finger tips slightly recurved; two plain yellow bangles on each wrist; well drawn. Background faded greenish blue. 7$\frac{1}{2}$" × 4". Pl. XLV.

M. v. 0015. Fresco fr. showing part of two heads $\frac{3}{4}$ to R., same type as central fig. in M. III. 002. Head on R. retains red-flapped turban, and behind is pendent end of white drapery; upper and back part of second head lost; flesh of both yellowish buff with pink on cheeks; colouring generally as in M. III. 002. Background vermilion; well painted. 6$\frac{1}{4}$" × 5".

M. v. 0016. Fresco fr. with portion of large pink lotus, outlined black on red ground. Rough work. 4$\frac{1}{2}$" × 3$\frac{1}{2}$".

M. v. 0017. Fresco fr. showing portion of arm (?), about life size, with snake-like bangle in red; flesh pink, shaded grey. Background pale blue. 3" × 3$\frac{3}{4}$".

M. v. 0018. a–f. Fresco frs. Unimportant pieces of background; no recognizable pattern. Largest fr. 4" × 5".

M. v. 0019. Fresco fr., showing portion of pink flower festoon on green ground (?); found in E. passage. 3" × 2$\frac{3}{4}$".

M. v. 0020. Fresco fr., showing portion of grey-green drapery (?) with red and flesh-pink lines at one side; found in E. passage. $3\frac{1}{2}'' \times 3''$.

M. v. 0021. Fresco fr., showing portion of light green drapery (?). $3\frac{1}{4}'' \times 3\frac{1}{4}$.

M. v. 0022. Fresco fr., showing on blue-black ground conventional floral scroll of Persian type. Stems of parallel green, red, and buff lines, with leaf and bud growths in green and red, outlined buff. Good work. $2\frac{3}{4}'' \times 2''$.

M. v. 0023. a–b. Fresco frs., showing ground of rich crimson divided by band of black, on which is floral pattern in red, green, and pink, outlined buff and black. On one edge, tips of two lotus petals in pink. Found in N. passage and probably from festoon of dado. (*a*) $4\frac{1}{2}'' \times 3\frac{1}{2}''$; (*b*) $5'' \times 3''$.

OBJECTS EXCAVATED AT RUIN M. x

M. x. 001. Girdle of soft silk, thick, cream-coloured, plain weave; in good condition in central part, but much worn towards ends through constant knotting. Cf. above, pp. 536 sq. Length *c.* 5′ 5″, width (selvedge to selvedge) 1′ $10\frac{1}{2}''$.

M. x. 002. Bundle of fabric frs., chiefly small rags of buff, yellow, red, and dark blue woollen stuff of more or less close twill weave; cf. N. xiv. iii. 006. e. and 007. c. Also fr. of dark brown-grey plain fabric; piece of thick buff felt with fabric backing (perhaps part of lined shoe, as T. xi. iii. 002), and handle or loop of plaited woollen thread. Gr. M. $6\frac{1}{2}''$. Pl. XLVIII.

M. x. 003. Pottery fr., brown clay, hand-made, lightly but evenly fired; roughly smoothed on outside apparently with a short-toothed comb smoother, used both horizontally and in zigzag strokes. $2\frac{7}{16}'' \times 1\frac{1}{2}'' \times \frac{1}{4}$.